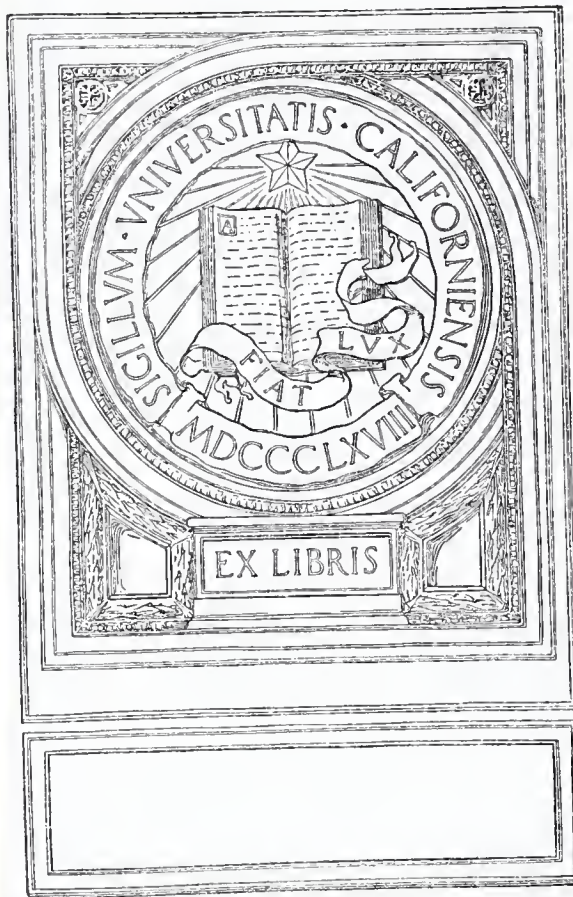


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The JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Vol. XLVIII FORT SMITH, ARKANSAS, JUNE, 1951 No. 1

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ROY CARL YOUNG, M.D., Psychiatry and Neurology

A. LAURIE YOUNG, Manager

Meat . . . in the Low-Sodium Diet

Clinical experience^{1,2} and investigative data³ indicate that the liberal use of meat may not be contraindicated when sodium intake must be restricted. Because unsalted meat contains only relatively small amounts of sodium, while contributing importantly to other nutrient needs, meat deserves special consideration in very-low-sodium diets, in sodium-poor diets, and in no-extra-sodium diets.

Table I lists the amounts of sodium³ in three kinds of meat. Table II gives the estimated amounts of sodium in hospital diets planned for cardiorenal vascular patients.⁴

SODIUM IN MEAT³

	Sodium Provided by 60 Gm. Serving	Sodium Provided by 100 Gm.
Beef, without bone	32 mg.	53 mg.
Lamb, without fat	66 mg.	110 mg.
Pork, without fat	35 mg.	58 mg.

Table I

SODIUM IN HOSPITAL DIETS⁴

Sodium-Poor Diets*				Very-Low-Sodium Diet†
40 Gm. Protein	70 Gm. Protein	100 Gm. Protein	130 Gm. Protein	70 Gm. Protein
400 mg. Na	500 mg. Na	800 mg. Na	1,000 mg. Na	200 mg. Na

Table II

*Foods prepared and served without salt.

†Weighed diet. May contain 4 oz. of unsalted meat.

(Normal diets contain approximately 4 Gm. of sodium daily.)

Hence, the data here shown indicate that relatively generous amounts of meat may be included in low-sodium diets.

Meat serves well in the therapeutic objective of maintaining a high state of nutrition in patients with congestive heart failure or nephritic edema by providing valuable amounts of biologically complete protein and of B complex vitamins, including the recently discovered B₁₂.

1. Wheeler, E. O.; Bridges, W. C., and White, P. D.: Diet Low in Salt (Sodium) in Congestive Heart Failure, J.A.M.A. 133:16 (Jan. 4) 1947.

2. Wohl, M. G., and Schneeberg, N. G.: Dietotherapy (Cardiovascular Disease), in Jolliffe, N.: Tisdall, F. F., and Cannon, P. R.: Clinical Nutrition, New York, Paul B. Hoeber, Inc., 1950, chap. 27.

3. Bills, C. E.; McDonald, T. C.; Niedermeier, W., and Schwartz, M. C.: Survey of the Sodium and Potassium Content of Foods and Waters by the Flame Photometer, Fed. Proc. 6:402 (Mar.) 1947.

4. Mayo Clinic Diet Manual, Philadelphia, W. B. Saunders Company, 1949, p. 113.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



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CHARLES HENRY, M.D., F.A.C.S.


Little Rock

PRESIDENT

Arkansas Medical Society

1951-1952

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.....The JOURNAL

OF THE ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Vol. XLVIII

FORT SMITH, ARKANSAS, JUNE, 1951

No. 1

PRESIDENT'S ADDRESS

EARLE H. HUNT, M. D.

Clarksville

Mr. Chairman, Members of the Arkansas Medical Society and Guests:

It is with profound humility in my heart and mind that I appear before you today.

It is my feeling of weakness and of my inability to be a real President of the Arkansas Medical Society. I had this feeling when you put me in as President-Elect. I felt it keenly when I assumed the presidency. Now as I stand here as your President of this great Arkansas Medical Society, I feel that very few of us are downright capable of really and truly serving this great organization as it should be. To say that I was and am honored by receiving this—the greatest honor that you, my fellow members of this Society, can bestow upon any member of this Society—does not convey my true feeling. Words simply cannot express my appreciation of this and other honors you have bestowed upon me.

During my forty-two years as a member, I have felt enough of organized medicine and my contacts with you to cause me not to miss a single meeting in forty-two consecutive Sessions, including this one. When I attempt to give an account of what has been done during the past year, I can frankly state that, due to the Korean muddle, which started in June, 1950, your President, Councilors and Committeemen have not been called upon to do a great deal. However, the activities of the officers during the past two years have been numerous, exciting, straining, trying and more or less expensive.

Before I go any further, I want to mention the fact that when our final check-up of our efforts for the past two years is tabulated, I am happy to state that Mrs. Louis Hundley and Mrs. Mason Lawson, co-chairmen of the Committee for the Extension of Medical Care, and Mrs. Warren Riley, now president of the Auxiliary to the Arkansas Medical Society, have done more for Arkansas medicine than any of our own members. How many thousands of letters these ladies have writ-

ten and have had written to our Senators and Congressmen could not be counted by any individual here in a week's time. I know of three thousand letters that were mailed out of one county in one week's time. The time and their own money which they have spent in traveling about our state, trying to help us in our fight—not only in socialized medicine, but in socialism and communism, in general—would surprise many of you. These ladies are as the spark plugs and the ever-willing cooperation of all the Auxiliary members throughout Arkansas have done more to help doctors than most of us realize. They have helped educate our people, generally.

The Cancer Program in Arkansas could not have gone as far as it has, had it not been for the efforts of our own faithful and untiring worker, Mrs. W. R. Brooksher. Also, it may not be generally known, but I want to state that Mrs. Brooksher has furnished considerably more than being the housewife of our own and ever-popular Secretary, Dr. W. R. Brooksher.

It was my privilege to be on the Council when we decided to hire an Executive Secretary of the Arkansas Medical Society. It is my candid opinion that the wise choice we made when we hired Sid Wrightsman will read down to our credit more and more in years to come.

We, as medical men, owe our public a debt that we assumed when we took the oath of Hippocrates. We must exert every effort to take care of the health of our people of all colors and creeds. A sick man is a sick man whether he is an outlaw or a university president, or even a doctor. And it has been my experience that doctors do get sick. In spite of the many, many times I have heard laymen say, "Why I didn't think doctors ever got sick," I am frank to admit that physicians are lousy patients. We must keep on trying, as we have been, to get more young doctors to locate in small towns and our medical colleges must try to turn-out more general practitioners and not as many specialists. Our public needs more doctors who are enthusiastic with the idea that they were called to practice medicine and that it is their duty to make

calls day or night as long as health will permit.

In numbers, there is no doctor shortage in Arkansas. One-fifth of all doctors in Arkansas are located in Little Rock. The population of Little Rock is about one-fifteenth the population of Arkansas. I have contacted several postmasters in rural and mountainous regions in our state and have asked the following question: "Do you know of any case anywhere in your area where any person has suffered unnecessarily long or has died because of inability to get or get to a doctor?" They all said no. Each one said that roads are good enough to get to the town or to the hospital and that they have not heard of any hospital refusing to take in any patient for lack of funds. The loudest kicks I have heard come from people who could not find a doctor at night and they have come from people who live in cities. For some reason, the doctors cannot be located. However, this is being attended to by doctors themselves in teaching people to call a central doctor-station, where a physician will be found and sent for to make the call.

Not until our armed forces had called so many more of our doctors in service than were actually required, did we have this so-called shortage of doctors and it is my opinion that the whole hubbub has been worked up and aggravated by the book put out by the Federal Security Administrator, Mr. Oscar Ewing. It is hard for me to believe that Mr. Ewing has sense enough to think of all those unfounded and supposed facts which he puts out. He is surrounded by people in whom he must have confidence or he is more dumb than I think he is to be led-off by such wild-eyed and screwball ideas. The millions of our taxpayers' dollars he is spending to fight doctors and to try discrediting our medical profession is downright shocking. His idea of compulsory health insurance and his many plans and schemes and bills introduced in the Congress to choke the welfare state down our people is pure socialism—and bear in mind, socialism is communism.

It has been told me, and I believe it, that Mr. Ewing told one of his secretaries that he would have so many different bills introduced in the Congress and so many different articles drawn-up in so many ways that the country would have compulsory health insurance before the public realized it. That is exactly what he has been doing. Some of the bills have idealistic ideas introduced. That is what gives it the "Appeal" state. So many people are looking for an idealistic state, be it the welfare state or whatnot. Socialism would be idealistic if it could and would

work. It never has and it never will work. You can place any four men in any isolated area that you may choose, giving each one \$1,000 in cash and turn them loose. In a few days or weeks, one of the four will have most of all of two of them and will have the third one of them wondering when he will get all of his.

Great Britain is now a socialistic government. From all reports, she is now in the worst financial and physical condition of any country in Europe. We are being led, or rather pushed, into the very same spot as England has been pushed into for the past forty or fifty years. The rank and file of our members do not know what has been and is being done against compulsory health insurance.

It is not known generally that our Society officers—and frankly, Dr. W. R. Brooksher—called the now-famous Denver meeting in July, 1949. At this meeting were representatives from each state medical society West of the Mississippi River. They recognized the fact that eastern doctors were doing very little to help our doctors. President Truman's Reorganization Plan No. 1 had been introduced, which would have ruined the nation. Representing Arkansas at that meeting were Dr. Euclid Smith, then President of the Society; Dr. W. R. Brooksher, Secretary; Dr. Charles R. Henry and, finally, Dr. Alstadt, a dentist. Dr. Brooksher was elected Secretary of the regional organization. It was decided at this Denver meeting that representatives from these Western states go to Washington, D. C., on Tuesday following that Sunday Denver meeting. Drs. Smith and Brooksher, having made the Denver trip, very promptly told me at 7:00 A. M., Monday, that I was to be in Washington, D. C., not later than Tuesday P. M. I was there. Our own Senator Fulbright had introduced a bill which, if passed, would kill President Truman's Reorganization Plan No. 1. Three doctors from Oklahoma, one from Oregon, one from Kansas, one from California, one from Minnesota and this speaker from Arkansas met in Washington, D. C., at 3 P. M., Tuesday, with Dr. Joe Lawrence, Secretary of the Washington Office of the American Medical Association.

Dr. Lawrence had remained in the city that day to see us, but informed us that he was tired and was leaving for a thirty-day vacation. This left our Committee on a high, dry spot. However, the Arlington County, Va., Medical Society gave a banquet in our honor that night which helped us get more of the local possibilities clear in our minds. This committee of eight members

went to work calling upon Senators. This is the committee which was named the grass-roots committee, given credit for the defeat of Truman's Reorganization Plan by Dr. Marjorie Shearon. It was not the magnetic personalities of the physicians involved which impressed the Senators. It was merely the just cause for which they were fighting. Had these eight doctors not made this trip, not one physician would have appeared before the Senators. It was astounding to me that no Washington, D. C., physician was doing anything for the medical profession's cause. However, the Arlington County, Va., doctors were doing all they could.

To make a long story short, Truman's Reorganization Plan No. 1 was defeated. It is a source of pride to me to recall the fact that I had the privilege to do my small bit in this fight. There are several doctors who have balked against paying AMA membership dues. I even have had doctors ask me as to what the AMA was doing or what it had done. I admit the AMA did too little five, ten, fifteen or twenty years ago. Had we all been awake back there we would not have had this fight of recent years.

Most of you were members back during that time. I was, too. Why didn't we raise up on our hind legs and start howling? We felt it could never happen to us. Just simple complacency and downright lethargy keep our voices silent. The present officers of our medical society are having the same trouble. Too many of you are doing too little to help. I must admit that it has been quite discouraging to ask different ones to serve and work on committees and some refused to serve and some who accepted, failed to attend any of their committee meetings.

Whose Society is this? I tell you it is not the officers'—it is YOUR Society. Do you want compulsory health insurance and socialized medicine, or do you not? It is now time to do something. Your officers have believed that you do not want compulsory health insurance. It has cost your officers' money out of their own pockets to try and help fight these socialistic and communistic tax money-grabbers and spenders. I believe we will win if we will all work together and back our officers.

We really are not all in favor of the same things. We are going to have to give and take. If we don't get organized, we will be only taking orders from Oscar Ewing's crowd.

We use the expression our good old free and easy United States. How free are we? Not

since fellow-traveler Henry Wallace had us kill all of the little pigs and plow up acres and acres of cotton, wheat, corn, etc., in the 1930's, have we been a free people. Along with this silly killing and plowing up came President Roosevelt's Fair Deal, WPA and numerous alphabet hook-ups—each and every one designed to give more and more of our unsuspecting people more and more for nothing in their pockets, with every county having hired workers, hunting up more and more people to give more and more out of our ever-increasing taxes. The masses actually felt they were getting something for nothing. Thank the Lord, large numbers are now beginning to see the true facts and are realizing they cannot get something for nothing. I know lots of people who are receiving more cash each month from the government than they have paid total taxes during their entire lifetime.

I desire to thank Drs. Charles Henry, Fount Richardson, Frank Kumpuris, George Steinkamp, Joe Shuffield, H. W. Thomas, James M. Kolb, G. R. Siegel and Arnold Henry for the work they have done for the Arkansas Medical Society. Their willing working attitudes should be an object lesson to us all. I also wish to confess that this is the first President's Address that I have ever read and I shall not be embarrassed if none of you ever reads this one. I have tried to do everything for the Arkansas Medical Society that has come before me. I have not taken any active political sides. I have tried to uphold the dignity of the office and I shall always be ready to help any of my medical colleagues.

Again, I wish to state that I sincerely appreciate the honor of being President of the Arkansas Medical Society.

CORRESPONDENCE

April 18, 1951

THE 69th ANNUAL CONVENTION OF THE
ARKANSAS PHARMACEUTICAL ASSO-
CIATION BEING DULY ASSEMBLED AC-
CORDING TO THE CONSTITUTION AND
BY-LAWS RESOLVE:

"That the Arkansas Pharmaceutical Association awards special commendation to the Arkansas Medical Society for its invaluable assistance in completing the 1951 legislative program, and desires this spirit of cooperation to be continued."

Certified and submitted by:

O. L. Dailey, Jr., Secretary-Manager.

THE AMERICAN ACADEMY OF GENERAL PRACTICE IN THE FIELD OF ORGANIZED MEDICINE *

JOHN R. BENDER, M. D.

Winston-Salem, N. C.

The largest, and possibly the last, group of doctors of medicine to organize as a national body was the general practitioners. Prior to World War I, groups of specialists had begun to organize and set up programs for standardization and elevation of their quality of medical practice. The specialists believed this to be necessary if they were to solve their problems and meet the increasing demands which modern society was requiring of the medical profession. Yet, the general practitioners, who render four-fifths of the medical service to the public, were lackadaisical and reluctant to face these challenges which were being created, until a few physicians, with vision and courage, began to notice the trends of medicine—the "writing on the wall," and organized the American Academy of General Practice.

Some of the founders of this organization were outstanding men in the field of organized medicine and were certainly not giving their time, assets, and abilities with a selfish or grandiose motive; but, instead, they were unselfishly answering the Damascus call for the more than one hundred thousand general practitioners of this nation, in order that the practice and place of the family doctor might remain incarnate upon this earth.

Time will not permit, nor is it necessary, to name all of these noble general practitioners, but I would not be respecting your medical society if I did not give credit to your colleague and past-president, Dr. R. B. Robins. Along with Dr. Robins is Dr. R. C. Dickinson, Dr. H. E. Murry, Dr. H. T. Smith, Dr. S. A. Drennen, Dr. Fount Richardson, Dr. W. R. Brooksher, Dr. L. H. McDaniel, and others—men who need no office, seek no fame, and ask no favors—but men who love the medical profession and respect the rights and privileges of their fellowmen and fellow practitioners. These noble men of high calibre and professional integrity, and others like them, mentally awake and courageously strong, saw that a job was to be done and that this job could be accomplished only by a national organization of general practitioners, for general practitioners.

The astounding progress in growth, from a number of approximately two hundred who met in a

hotel room in Atlantic City in 1947, until today four years later, to approximately fifteen thousand reflects the wisdom of those men. Can we not say: "They built better than they dared dream?"

In the beginning, we should recognize that the American Academy of General Practice is a voluntary corporation; and, that as a private voluntary corporation, it is distinguished from a public agency or political body which some have a tendency to believe it to be; and, as such, it operates under different rules of law.

The Congress of Delegates of the American Academy is not a legislative body. It may establish policies and enact resolutions binding upon the Executive body, the Board of Directors, but it does so merely as the representative of the members of the corporation.

The Board of Directors is the governing body of the Academy and is subject to restrictions set forth in the Constitution and By-Laws, or imposed by resolutions enacted by the Congress of Delegates; and, the Board possesses sole power over the affairs of the Academy, acting through the Congress of Delegates.

The Board of Directors elects its own Chairman and he, as the first officer of the organization, is invested with broad general powers of management and supervision. He is without power, however, to do any act which is beyond the objectives and purposes of the Academy, or to revoke the action of the Directors of the Congress of Delegates.

The President of the organization is looked upon as its official spokesman, with powers, acts, and duties subject to the control and direction of the governing board.

The Vice-President, other than being a member of the Board of Directors, has little to do with the conduct of the affairs of the Academy except in the absence of the President.

The Treasurer is the custodian of the corporate funds, which automatically places him as Chairman of the Finance Committee. He is elected by the Board of Directors, but does not necessarily have to be a member from the Board. He must be, however, a member of the Academy.

The President-Elect is a member of the Board of Directors and has no other duty or authority until he assumes the Presidency.

The Speaker of the Congress of Delegates is a member of the Board of Directors, and his powers in connection with the Congress are extensive. He presides at all meetings of the Congress, ap-

* Read before Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 23, 1951.

points all reference committees, and any special committees of this body.

With these basic facts pertinent to the organizational structure and the governmental body of the Academy, it is unnecessary to deal further with any specific officer in person. The Board of Directors has appointed important commissions and committees to establish basic policies and discharge the duties of the Academy. Time does not permit an enumeration of the activities and functions of all these commissions. However, I feel that certain of these should be dealt with in some detail and I would like to pay particular comment to the Commissions on Hospitals, Education, Membership, Credentials, Rural Health and the Publication Committee.

The Hospital Commission. The objectives of this commission are to effectuate the available facilities of the community hospital to qualified general practitioners in order to assist in maintaining the highest standards of hospital practice, and to work toward the proper integration of the general practitioner in hospital staff organization. This commission represents the Academy in its relations with other organizations concerned in hospital standardization, teaching, and administration. This commission has done a prodigious amount of work within the past three years at a personal sacrifice of time and money on the part of every member of the commission.

The first and foremost project of the Hospital Commission, the publication of a Manual on the Establishment and Operation of a Department of General Practice in Hospitals, has been completed. This manual provides the concrete and specific suggestion for the integration of general practitioners in hospital staff organizations, and has been approved by the American College of Surgeons, the Council on Medical Education and Hospitals, the American Hospital Association and the Catholic Hospital Association. Many questions have been asked by hospital administrators and the deans of medical schools regarding the procedure for establishing a program of general practice in teaching hospitals and the method of appointment of general practitioners to the staffs of hospitals associated with medical schools. Dr. Melvin Caseburg, Dean of St. Louis University School of Medicine, appeared before the Hospital Commission in St. Louis on February 18, 1950, and concluded with these remarks: "I am willing to appoint general practitioners to the faculty as well as the hospital staff, if and when I am certain that they can definitely contribute educationally

speaking to the overall teaching program of the University."

To dwell upon this subject at length might seem a waste of time to many of you members who have an opinion similar to the one expressed by so many of the Academy members in the past concerning the general practitioner's privileges in the general hospital. To-wit: "I have no problems so far as hospital practice is concerned." And: "It can't happen to me";—only to have these individuals appearing before the Hospital Commission sometime later, asking that the Commission take action whereby local problems could be corrected.

Allow me to say here that not only in the hospital field, but in every field of medicine, as it applies to general practice, all problems should be worked out and corrected, in so far as possible, on a local basis. The Academy does not desire, nor does it expect, to enter into polemic, political, or local controversies. That is the job and prerogative of the local doctors themselves, and strength for correcting local problems can be achieved best through a strong local Academy membership. Therefore, it behooves every general practitioner to join his local, regional and state chapters and become an active member, giving of his most constructive criticism and his most experienced knowledge and efforts in the solution of local problems as they affect the practice of medicine in his locale.

Educational Commission. The Educational Commission has also done a prodigious amount of work and joint meetings have been held by the Educational Commission and the Hospital Commission to more thoroughly effect an overall policy, in as much as the two principal interests of the Academy concern hospital practice and post-graduate education of the general practitioners. The primary objectives of the Commission on Education are two-fold. First, to expand facilities for post-graduate or continuous study for general practitioners; and second, it endeavors to stimulate a utilization of such facilities. The Commission evaluates and classifies all formal post-graduate courses, conducted in the United States, and periodically reports on such courses to the membership. The Commission also encourages the extension of facilities for post-graduate training through conferences with teaching institutions and medical organizations.

In the accomplishment of these objectives, the Educational Commission will coordinate with the Commission on Membership in making member-

ship in the Academy a badge of attainment and superior qualification.

I would like to inject here a personal note of commendation to my friend, and your colleague, Dr. Fount Richardson, for the nebulous amount of work he has done in his deliberations with this Commission. The character and quality of Dr. Richardson's work on this Commission during the past year were such that your Board of Directors reappointed Dr. Richardson to the Commission for a term of three years, and his appointment was unopposed.

Commission on Membership and Credentials. This Commission has worked conjointly with the Commission on Education in the evaluation of different types of post-graduate study and the primary duty of this Commission is to codify, interpret and enforce the one hundred and fifty-hour continuous study requirement which is a *sine quo non* of membership in the American Academy of General Practice; and, the principal objective of this commission is to achieve a situation under which the Academy will enjoy a large geographical membership. But, an objective which is more important is to make membership in the Academy an evidence of superior qualification for all of its members.

Commission on Legislation and Public Policy. The function of this commission is to represent the members of the Academy of General Practice in matters pertaining to relationships between the general practitioner and the public; and, to act in the capacity of liaison officer to maintain relations with other medical organizations, as well as lay agencies, in matters pertaining to public policy of the Academy in regard to important public issues.

This Commission has not attempted to supersede or duplicate the activities of the American Medical Association in the field of public relations or legislation. Its aim is to make the Academy an articulate spokesman for the general practitioners of America. Thus, it represents a large segment of the profession in all matters involving the public and the profession in the social, economic, and political life of the country. This commission follows legislative trends and developments affecting the profession, and especially those of particular significance to general practitioners. Within the purview of its activities, it carries on a large amount of correspondence with Governmental agencies, medical associations, and public organizations.

Commission on Rural Health. This is the most newly created commission of the Academy and it

bespeaks the Academy's interest in matters pertaining to rural health and health facilities. Its interest and endeavor is to coordinate its facilities with the Committee on Rural Health of the American Medical Association. The Academy recognizes that nearly all rural practitioners are general practitioners; therefore, it can be of yeoman service through its Rural Health Commission in coordinating its facilities with the Committee on Rural Health of the American Medical Association toward improving health services for the rural population.

Committee on Publication. This committee ostensibly supervises the publication of all official material by the Academy. Its primary function, however, concerns the publication of "GP." The Committee has already gone forward toward the achievement of its primary objective—that is, to give the American Academy of General Practice an official journal that will be "second to none" in quality and appearance. I feel that this achievement can be attested by the article appearing in *Current Medical Digest*, March, 1951, which comments: "This newest of major medical periodicals and voice of the much neglected general practitioner, has just reached its first birthday; and 'GP's' determination to become the 'finest medical journal in America' has advanced a long visible way on its journey."²

Dr. Stanley R. Truman, Past President of the Academy and Chairman of the Publication Committee, describes the success of "GP": "Not step by step, but three stairs at a time."³ "GP" is a medical journal that aims to be not merely a record of scientific thesis, a repository of contributions to literature, but a magazine filled with articles of immediate interest and value, with up-to-date ideas suitable to the needs of the busy general practitioner. This up-to-date and outstanding medical publication is given as a token of good will to all members of the Academy. This offers the general practitioner an added advantage of active Academy membership.

There are other commissions and committees in the integrated structure and framework of the Academy, all of which are important and outstanding, each having a specific function; but, all with the primary objective of helping the general practitioner practice better medicine and at the same time make his burdens easier and his humble lot among the profession of men not one of antiquated practice in socio-economic relations, but a citadel of service and professional respect.

This briefly outlines some of the basic structure

of the Academy and its potential forces for worthwhile achievement; but, no organization can advance further than the enthusiasm of its members; and, its influence for good is only as strong as the united strength of its membership.

While the influence and impetus of the Academy is being felt in the field of medical education, hospital administration, and government organizations, its numerical strength is much too small to achieve the success which it rightfully should, and certainly shall. Each general practitioner of medicine should feel that the objectives and aims of the Academy are the objectives of all and are laid down for his benefit. Therefore, it is a direct challenge to every general practitioner to avail himself of membership in the Academy; and, too, he should recognize that the privilege of being a member and the advantages of membership carry with them definite obligations and responsibilities—first to himself, and then to his colleagues. He should survey the field of medicine, not only for its accomplishments and glorious achievements, but also for its demerits, its irregular practices and shortcomings; and, weigh himself as a doctor in the "balance of medical progress" in an endeavor to see if there is anything he can do under the auspices of this Academy to fulfill its obligations and attain its objectives.

In the course of this fast-moving mechanized age, few people realize how adequately medicine has met its exacting demands. It is a truism that the world's significant social and moral reforms would have been improbable without the contributions of medical science; and, that the sum total of human happiness is intimately concerned with the progress of medicine. However, the medical profession seems to be threatened for the moment, because of its altruistic traditions and its inadequate methods of public relations and education. No other group of enterprise has such an opportunity to preserve the cherished heritage of the past and maintain public approval that will be necessary if we are to retain our coveted independence and individuality. It is our duty and obligation, as physicians, both individually and collectively, to teach the public not only the achievements of medicine, but the heroic sacrifices made in the pursuit of pure science and the modest and conscientious application of these discoveries to public service.

The general practitioner should seek to bring about the best possible spiritual and physical adjustment without reference to the patient's social, moral or financial position; and, as such, medical

practice rests upon a tripod—the patient, the doctor, and God. This relationship, sacred to both the patient and physician, should not be disturbed. This should be our tenet, this must be our goal, in the progress of medical science and its application to the needs of humanity.

I think we, as physicians, should study ourselves in the words of Roland: "We shall both be merrier and happier next year, if now we do for others as much as past generations have done for us." We should reach out for bigger things, rather than curl up in our own little shells of selfishness and snarl at the behavior of others.

To be asked to discuss the reasons and advantages of membership in the Academy of General Practice is almost as nebulous as trying to discuss the reasons for democracy, security, education, or the American home. The Academy of General Practice is first and foremost for general practitioners. It is set up with that objective in mind and while it works closely and harmoniously with the American Medical Association and other branches and segments of organized medicine, it has a function to perform and an obligation to fulfill, first and foremost to the general practitioner, in an attempt to meet some of his problems which he, as an individual practitioner, would be unable to meet alone. I know there are many individual practitioners who think they can individually carry their own practice without the aid of organized medicine. And, I wish to say here, that the proponents of this school of thought are directly responsible for many of the repercussions that have been placed at the door of American medicine.

There are likewise individuals who feel that they can practice medicine without keeping abreast of the newer trends and progress of science; they have the attitude of one of my colleagues who said to me sometime ago: "If you boys who are interested in this stuff will just keep socialized medicine away from the American doctor for the next five years, by that time I will have made enough to retire and then 'to hell with it'."

That, my friends, was an individual doing general practice. He belongs to his county and state medical societies only because membership is a requirement for obtaining and retaining his liability insurance and his disability health policy. His selfish attitude demands that someone else provide privileges for him through the channels of organized medicine, without any effort on his part. And he, like many other physicians, will not classify himself as a general practitioner. He resents being considered as one, even though

eighty to ninety per cent of his work is general practice.

Another general practitioner colleague told me about a year ago that twenty-five dollars was too much to pay the National Academy for the first year's dues. After I outlined many of the advantages he could expect to receive for his twenty-five dollars, including the journal "GP," and irrespective of the fact that annual dues after the first year would be fifteen dollars, his reply was: "I don't have that kind of money." My reaction to this doctor would have been one of sympathy and toleration, instead of belligerence, if I had felt he was telling the truth. But, I knew at that time he was playing politics in order to get into one of the local clubs that required an admission fee of five hundred dollars and a retainer membership fee of eight dollars per month. Please do not take these remarks to mean that I feel membership in a local country club is unnecessary, or that the membership dues are exorbitant. The point is he was unwilling, and felt that he was unable, to pay twenty-five dollars for membership in the American Academy, but yet was begging membership in a social organization with an entrance fee twenty times as much.

So long as practitioners of medicine take this attitude toward their medical organizations and professional problems, and become so penny-wise and pound-foolish, I have a fear we will be thrown into a state of bewildered confusion, with only ourselves to blame, when we hear the cry that we gave too little and awoke too late.

Educators and specialists talk much about the general practitioner, and somewhat tritely remark: "The general practitioner—the family doctor, is the backbone of medicine"; then, turn around and treat him as though he were the coccyx. If the general practitioner is the backbone of medicine, and I see no reason why he shouldn't be for he does from seventy to eighty-five per cent of the medical practice in this county, why should he not be treated as the backbone and referred to as that segment of organized medicine which supports the body of medicine and from which all the specialized extremities project? And, respect him as such—see to it that he gets a fair deal or a square deal, commensurate with his capabilities by virtue of experience and knowledge on the staff of his local hospital; and, equally as important, see to it that medical schools and teaching institutions give him an invitation to participate in their out-patient departments, in their hospital ward rounds, their clinics, their open forums and round table discus-

sions. Let him meet with the students and get to know them, and the students become acquainted with him and treat him as a valuable colleague and an adjunct to the system of medical education and practice instead of one unwanted or someone creating embarrassment among them. To be treated as the coccyx is bad, but to be treated as infectious is worse and may create a breach within the medical profession which is unnecessary and unsavory.

This attitude of some of our colleagues, more than any other single factor, is responsible for the multiplicity of pseudo-specialists that are crowding the field of medicine and creating a sense of indignation when they are referred to as general practitioners; when the truth is, these pseudo-specialists are neither general practitioners nor specialists; they are merely self-appointed by virtue of grandiose ideas, nurtured by false delusions that they can acclaim social prominence through such a classification and thereby it becomes incumbent upon them to throw slurs and aspersions against their fellow practitioners. The correction of this unwarranted and misguided evil can be corrected only by the doctors themselves and the sole responsibility rests upon the general practitioners and upon those specialists, who are specialists by education, experience, certification and ethical medical practice.

Members of the Academy of General Practice have to shoulder the first responsibility of this burden. It is up to us to keep the quality of medical practice and the requirements for membership in the Academy on such a high plane that eligibility for membership will be considered a privilege and an honor. Then, the members of the different specialty boards should join with the Academy in its program of continuous medical education, superior medical practice, and encourage those members who are not certified specialists to affiliate themselves with the Academy, accepting their share of its responsibility and enjoying their proportionate part of its privileges; and, thereby effect a so-called professional "squeeze play" with the specialist on one side and the general practitioner on the other, against those physicians who are neither "fish nor fowl," and expose them to the profession for the camouflaged practitioner-specialists they are. Thus much of the unwarranted criticism and ridicule which is placed upon the medical profession will be relegated to its proper sphere and the accusing finger can point out on the dial of medical

practice the spot where criticism is due and where poor public relations between the profession and the laity harbor.

The American family would then be proud to belong to the clientele of the family doctor and they would once again reiterate the tribute to the old family doctor, as found in the letters: "The Corner on Hartley Street." It says in part: "He may not know much about the research of Calmet, or be able to excise a Gasserion ganglion; but he knows precisely when to call upon the man who does. On the other hand, upon the hundred little everyday problems of medical practice, and the unclassified ailments, that have never gone into textbooks, nor have been dignified with a Latin name, there isn't a man on Hartley Street who could give a more valuable opinion."⁴

Yes, my friends, such men in medicine are necessary for the very existence of our main livelihood, our economic and social structure, our scientific achievements, our cultural advancement, our American way of life, our democracy—yes, even civilization itself. "Such men are not only the pillars of our profession, but also its topmost pinnacles."

The American Academy of General Practice is ready to stand by the side of the general practitioner in the inferno of any battle. You general practitioners owe it to yourself, to your profession as ethical practitioners of medicine, to society as American citizens who believe in our American customs and the principles of free enterprise, and to those who shall come after us—to align yourselves with your fellow colleagues in active Academy membership and march forward with the Academy in the battles which are yet to be fought and won, in order that our system of American medicine and the American way of life shall be preserved. "We can only pay our debt to the past by keeping the future indebted to us."

To those of you who have not joined, but who are eligible for membership, an invitation is extended—your application will be welcomed.

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- ³ Truman, Stanley R., M. D.: "A Big Job Well—Begun"; GP, Vol. 1, No. 1, American Academy of General Practice, April, 1950.
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PERSONALS AND NEWS ITEMS

The Arkansas Dermatological Society held its second annual meeting at Little Rock, April 24th, and the following 1951-52 officers were elected: President, D. W. Goldstein, Fort Smith, and Secretary-Treasurer, Ray Fulmer, Little Rock.

Ellis Gardner, Russellville, was awarded the H. King Wade handicap trophy at the 75th Annual Session golf tournament, Little Rock, on April 24th.

T. L. Adair has been elected president of the Bald Knob Rotary Club.

J. J. Monfort and Charles Taylor, Batesville, conducted a diagnostic cancer clinic at Hardy recently under the auspices of the Arkansas Division, American Cancer Society, and the Independence County Medical Society.

Coy Kaylor has been released from military service and has returned to practice of orthopedics at Fayetteville.

Dr. and Mrs. Virgil Payne, Pine Bluff, attended the Triological Society meeting in Atlantic City and later visited in New York during May.

Paul Stroud has been elected a director of the Jonesboro Rotary Club.

Howard S. Stern has moved to new offices at 1315 Linden Street, Pine Bluff.

Mrs. Warren S. Riley, State President of the Woman's Auxiliary to the Arkansas Medical Society was guest of honor at the Craighead-Poinsett County Medical Society and Auxiliary meeting Wednesday evening, April 4. After dinner with the doctors the ladies were invited to the home of Mrs. P. W. Lutterloh for a short business and social meeting. Mrs. Riley gave us an informal talk on Auxiliary work in the state. Eleven members and the following guests, Mrs. Riley, Mrs. G. D. Murphy, Jr., of El Dorado and Mrs. Clark M. Baker of Paragould, were present.

In attendance at the 1951 annual meeting of the American Psychiatric Association at Cincinnati May 7-11 were A. C. Kolb, W. P. Kolb, and Elizabeth D. Fletcher, all of Little Rock.

THE JOURNAL

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to the membership.

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PHYSICIANS AND HEALTH PERSONNEL FOR RURAL ARKANSAS

With this theme, the Rural Health Committee of the Arkansas Medical Society with the assistance of the Farm Bureau Federation, the Arkansas Dental Association, the Council of Home Demonstration Agents and the Extension Service of the University of Arkansas, is sponsoring a conference to be held August 9th and 10th in Little Rock. It will be the purpose of the conference to help the medical profession and the rural citizens to assess their individual responsibilities in the solution of Arkansas' rural health problem.

Nationally prominent speakers, Mrs. Charles Sewell, of the National Council of Home Demonstration Agents; Mr. Paul Miller, of the Extension Service of Michigan State College; Dr. F. S.

Crockett, Chairman of the Committee on Rural Health of the American Medical Association, and Mr. Aubrey Gates, Field Representative of the American Medical Association's Rural Health Committee, will address the meeting. State speakers will include Dr. Lewis Webster Jones, President of the University of Arkansas; Mr. Joe Hardin, Grady, Arkansas, and Dr. Arnold Henry, Chairman, Committee on Rural Health, Arkansas Medical Society. The Woman's Auxiliary to the Arkansas Medical Society will be active in the plans. The July issue of The Journal of the Arkansas Medical Society will carry the full program.

The importance of evaluating and attempting to obtain a solution for some of Arkansas' rural health needs is such that county medical societies are urged to arrange for representation at the conference.

KREBIOZEN

Press notices on a new agent recently developed and used in the treatment of cancer, Krebiozen, have caused widespread interest, as is customary with any new therapy which may offer hope in the cure or relief of malignancy. The American Cancer Society has announced, in a release, the following information on the new agent, abstracted from a brochure prepared by Dr. A. C. Ivy, Head of the Department of Clinical Science, University of Illinois.

"Krebiozen is a biological agent separated from the serum of a horse after 'stimulation' of its reticulo-endothelial cells. Its discoverer is Dr. Steven Durovic and apparently the present supply is produced in Argentina.

"Hypothetical basis of the material rests in the assumption that every living cell contains a regulator of its proliferative activity which is also influenced by the environment. This regulator is called Krebiozen. It controls the permeability of the cell or the cell's enzyme systems so that in its absence or deficiency, anaerobic oxidation and acidity of the cells is increased and uncontrolled growth occurs. Krebiozen is assumed to be present especially in the reticulo-endothelial cells. When these cells are stimulated, Krebiozen, not normally present in the blood, is released and can be extracted from the plasma. Finally Dr. Durovic held that if Krebiozen is supplied, cells in early stages of malignancy will be normalized and those in advanced stages will be killed or damaged.

"Toxicity has not been observed in animal tests nor during repeated administration of the

substance to patients.

"Krebiozen is said to have caused softening, regression and in some instances complete disappearance of spontaneously occurring malignant tumors in cats and dogs. * * *

"Present results in 22 patients: Dead: 8, all showed anatomical and clinical improvement. Alive: 14, from 4 to 17 months after start of treatment; 2 have no detectible evidence of cancer, 12 have shown various degrees of regression, 5 of the 14 are alive from 12 to 17 months. * * *

"The currently available supply of Krebiozen is said to be small.

"The present method of distributing Krebiozen is based on the usual procedure employed for new drugs, i.e., drugs not authorized by the Food and Drug Administration for general use."

THE 1952 ANNUAL SESSION

The 1951 annual session met with general favor among members in attendance. Members can play an important part in the arrangement of plans for the 1952 session if they will give their suggestions and comments at an early date. Change of meeting days to Monday, Tuesday and Wednesday and of location to the hotel were generally praised. The scientific program was the subject of much approbation. The Secretary's office will welcome the suggestions and comments of members on a continuation of practices inaugurated at the 1951 annual session and any other ideas which may be offered.

CORRESPONDENCE

Dear Mr. Wrightsman:

On or about April 20, 1951, Dr. Walter C. Humbert, Director, Blood Program Midwestern Area, American National Red Cross, with offices in St. Louis, Missouri, called at my office and verbally advised that the proposed civilian-defense blood bank program for the state of Arkansas would through necessity be altered for the time being to include only the defense needs requirements for the program. Dr. Humbert pointed out that the American Red Cross Blood Program is financed by voluntary contributions from the American people. These funds are raised through an annual fund campaign conducted each March. It is with these contributions that the American Red Cross and its affiliated chapters maintain the services rendered to the communities and to the nation at large. The contributions to the 1951 fund raising campaign of the American Red Cross by the people of the United States fell short of the goal set for Arkansas. For this rea-

son and this reason alone, it will not be possible for the American National Red Cross to establish a civilian blood program in Arkansas at this time.

It is understood, however, that present plans of the American Red Cross include the establishment of the Defense Blood Program in Arkansas on or about July 15, 1951. This Defense Blood Bank will be temporarily housed in quarters provided by the new Veterans Administration Hospital located here in Little Rock, Arkansas. The American National Red Cross will furnish and maintain well-equipped bloodmobiles with trained professional and technical personnel to collect defense blood in those counties in the state of Arkansas that have expressed a willingness to cooperate in the blood program. The Red Cross feels certain that Arkansas and its people will wish to help supply whole blood to our forces in Korea and help supply blood for manufacturing irradiated dried plasma for the use of our Armed Forces overseas and in continental United States hospitals where these cases are treated when returned to the United States. The American National Red Cross asks, therefore, that the people of Arkansas and the medical societies throughout the state endorse and participate in the Defense Blood Program as an interim arrangement until a civilian blood program service can be established in the state. It is further understood that the civilian phase of the blood program will in all probability be established during the year 1952. The establishment of this phase of the program is dependent on the success of the 1952 fund raising campaign. It will be a simple procedure in the future to convert to the dual civilian and defense program, thereby serving the various communities of the state as well as the national defense effort. The American National Red Cross sincerely regrets its inability to go ahead with the civilian program at this time.

You will recall that during the State Meeting tentative plans were afoot for this announcement to be made before the State Meeting. You will also recall that it was felt that such an announcement would be noted by many more members of the medical profession should it be published in the next issue of the Journal. It is suggested that you condense this letter as you may see fit and print suitable notice in the next issue of the Journal. I am certain that it would be agreeable with Dr. Walter C. Humbert for you to indicate that his office made this announcement to us.

Yours very truly,
Edgar J. Easley, M. D.

PROCEEDINGS OF SOCIETIES

Craighead-Poinsett County Medical Society met at Jonesboro May 2nd for a program which included a talk on the State Legislature by Joe Shuffield, Little Rock, and a discussion on the activities of Arkansas pharmacists by Mr. Wade Willis, Magnolia, and Mr. O. L. Dailey, Jr., Little Rock, President and Secretary-Manager, respectively, of the Arkansas Pharmaceutical Association. The Marked Tree vocal ensemble rendered several musical selections during the meeting.

The Fifth Councilor District Medical Society met at Camden May 8th for its annual dinner meeting and the following scientific program: "Plans for the Medical School," Hayden C. Nicholson, Dean, University of Arkansas School of Medicine and "Surgery and Hypertension," William G. Cooper, both of Little Rock. The following officers for 1951-52 were elected: President, W. J. Hunt, Warren; Vice-President, A. D. Cathey, El Dorado and Secretary, J. L. Dedman, Jr., Camden.

The Arkansas Chapter, American College of Surgeons, met at Little Rock March 29th for the following program: "Management of Burns," Ellery C. Gay, Little Rock; "Hysterectomy, Indication and Choice of Operation," Willis E. Brown, Little Rock, and "Anesthetic Emergencies," Edwin Rushia, Little Rock. Officers elected are: President, M. C. Hawkins, Jr., Searcy; Vice-president, W. B. Harrell, Texarkana, and Secretary, D. E. White, El Dorado.

The Benton County Medical Society met in dinner session at Rogers May 10th with J. L. Pickens, Bentonville, speaking on "Common Ear Affections."

L. A. Dean, Secretary.

The Sebastian County Medical Society was addressed May 8th by I. Meschan, Little Rock, on "Radiologic Defense."

Art B. Martin, Secretary.

RANDOM THOUGHTS OF THE SECRETARY

May 1st. We would have enjoyed the meeting of the Washington County society tonight if I. Fulton Jones who invited us to accompany him had not left us behind in a forgetful moment.

May 8th. Meschan visits the county society talking in most interesting terms of atom bombs and their medical defense; prior to the meeting dining with Mendelsohn, Goldstein and Meschan, learning that Mendelsohn is facing prosecution for keeping a vicious dog and it would seem that a radiologist is at least entitled to keep for company one dog—man's best friend—and what radiologist can boast other friends?

WOMAN'S AUXILIARY



MRS. JAMES G. MARTINDALE

Hope

President, Woman's Auxiliary to the
Arkansas Medical Society, 1951-1952

The Twenty-Seventh Annual Session of the Woman's Auxiliary to the Arkansas Medical Society was held at Hotel Marion in Little Rock, April 23, 24, 25, 1951.

Registration began at 9:00 A.M., Monday, April 23, and a pre-convention board meeting was held at 11:00 A.M.

Dr. R. B. Robins, Advisory Council Chairman, and Mrs. L. S. Thompson, President, Woman's Auxiliary to the Southern Medical Association, Dallas, Texas, were guest speakers at the luncheon. Mrs. Warren S. Riley, President, presided at the luncheon.

The general session opened at 2:00 P.M., with Mrs. Mason G. Lawson presiding. Invocation was given by Mrs. W. J. Hunt. Distinguished guests were introduced by Mrs. Lawson: Mrs. Arthur A. Herold, President, Woman's Auxiliary to the American Medical Association, Shreveport, La.; Mrs. Harold F. Walquist, President-Elect, Woman's Auxiliary to the American Medical Association, Minneapolis, Minn.; Mrs. L. S. Thompson, President, Woman's Auxiliary to the Southern Medical Association, Dallas, Texas. Re-

ports of officers and committee chairmen were given. Mrs. J. G. Martindale gave a report of the Seventh Annual Conference of the Woman's Auxiliary to the American Medical Association and Mrs. Louis K. Hundley gave a report of the convention of the Woman's Auxiliary to the American Medical Association. Mrs. Gordon P. Oates reported on the meeting of the Woman's Auxiliary to the Southern Medical Association.

The session on Tuesday morning began with a past-president's breakfast in Parlor B, with Mrs. B. A. Rhinehart, Chairman, presiding. Dr. Earle Hunt, President, Arkansas Medical Society, spoke to the Auxiliary at their morning session. County Auxiliary reports and all other committee reports were given.

Dr. Charles D. Tibble was speaker at the Memorial Service which was held jointly with the Arkansas Medical Society.

The luncheon on Tuesday was held in the Continental room with Mrs. Mason G. Lawson, presiding in the absence of Mrs. T. D. Brown. Introduction was made of past-presidents, state officers, wives of officers of Arkansas Medical Society. Mrs. George B. Fletcher, Poet Laureate, and one of Arkansas' best known poetess, entertained the group with her poems.

Mrs. Arthur A. Herold and Mrs. Harold F. Walquist gave inspiring talks to the group. Mrs. Gardner Landers presented the certificates of merit to the Auxiliaries. Mrs. Walquist conducted the installation of officers after which Mrs. Warren S. Riley presented the gavel to the incoming President, Mrs. J. G. Martindale.

The Pulaski County Medical Society was host at the social hour held at 6:00 P.M. on Tuesday evening in the Colonial, Coach and El Toro Rooms, Hotel Marion. The buffet supper and dance followed.

The new president, Mrs. J. G. Martindale, presided over the post convention board meeting and school of instruction held Wednesday morning. Dr. Charles R. Henry, President, Arkansas Medical Society, Dr. R. C. Dickinson, Chairman, Advisory Board, and Mr. Aubrey D. Gates, Field Advisor, American Medical Association, gave interesting talks. Mrs. Walquist spoke on "The Auxiliary—Its Objects and Ideals."

Two panels under the leadership of Mrs. Louis K. Hundley and Mrs. Mason G. Lawson were given after which question-answer periods were held. Explanation of our Four Funds and our Budget were given by each chairman. The ses-

sion adjourned to the El Toro room for luncheon where the rest of the program was resumed.

The Woman's Auxiliary to the Garland County Medical Society met Monday afternoon, April 16, at the home of Mrs. Jack Wright with Mrs. Leeman King and Mrs. E. K. Clardy as co-hostesses.

Mrs. John Dodson, President, called the meeting to order. A freedom film, produced by Harding College, entitled "Going Places" was shown.

Mrs. Leemon King, Mrs. Jack Wright and Mrs. E. K. Clardy presented the program on "The Emotional and Social Problems of the Aged."

Mrs. Dodson appointed Mrs. Walter Klugh, Mrs. Jack Wright and Mrs. Paul Woods to purchase necessary linens insofar as our funds would allow for the colored hospital.

The next meeting will be at Mrs. George B. Fletcher's Lake Hamilton home.

Mrs. C. W. Parkerson, Sec'y.

The Woman's Auxiliary to the Jefferson County Medical Society met at the Pine Bluff Country Club on May 4th.

Mrs. J. Clyde Hart gave a report of the recent state convention of the Woman's Auxiliary to the Arkansas Medical Society held at the Hotel Marion in Little Rock in April. The main new projects of the Auxiliary for the coming year will be civil defense and rural health, she stated.

Mrs. Hart announced that Dr. Hunter A. Causey, Pine Bluff, will serve as advisor to the Auxiliary from the Jefferson County Medical Society for the coming year.

Mrs. J. S. Spillyards was appointed by the President as Auxiliary representative on the City-Beautiful Commission. There were eleven members present.

During the Fourth Councilor District meeting on May 31st, an open house will be held for wives at the Pine Bluff Country Club from 3:00 P.M. to 6:00 P.M.

BOOK REVIEW

Quinidine in Disorders of the Heart: By Harry Gold, M. D. Paul B. Hoeber, Inc., New York, N. Y., 1950.

This monograph is a clear and concise presentation of all of the facts needed in the treatment of cardiac arrhythmias with quinidine. The author has stressed fundamentals of physiology and pharmacology in his discussion of the action of quinidine on the cardiovascular system, and has then applied these principles in the specific arrhythmias in which quinidine is useful. This book should remove many of the old fears regarding the use of quinidine, and is highly recommended to student and practitioner.

PROCEEDINGS, SEVENTY-FIFTH ANNUAL SESSION**ARKANSAS MEDICAL SOCIETY****Hotel Marion, Little Rock, Arkansas****April 23rd, 24th and 25th, 1951****FIRST GENERAL SESSION****Monday, April 23, 1951 — 9:30 A. M.**

The meeting was called to order by President Hunt.

The invocation was given by Rev. R. D. Adams, Pastor, First Presbyterian Church, Little Rock.

The address of welcome was given by Edgar J. Easley, President, Pulaski County Medical Society.

The scientific program then followed in order. "The Why of the Academy of the General Practitioners"—John R. Bender, Winston-Salem, N. C.

"Jaundice"—Philip Thorek, Chicago, Ill.

"Differential Diagnosis and Treatment of Collagen Diseases"—Col. Charles T. Young, Fort Sam Houston, Texas.

"Newer Drugs in the Treatment of Epilepsy"—Meyer A. Perlstein, Chicago, Ill.

"Cancer of the Lung: A Report of Fifty Cases"—D. A. Rhinehart, Little Rock.

SECOND GENERAL SESSION**Monday, April 23, 1951 — 1:30 P. M.**

The meeting was called to order by President Hunt.

The scientific program then followed in order.

"Vertigo and Tinnitis"—Edmund P. Fowler, Jr., New York, N. Y.

"Physician-Nurse Relationship"—Mrs. Catherine Hockaday, President, Arkansas Nurses Association, Pine Bluff.

"The Role of the General Practitioner in the Rural Health Program"—Mr. Aubrey Gates, Committee on Rural Health, American Medical Association, Chicago, Ill.

"Management of Breast Lesions"—James H. Growdon, Little Rock.

"The Optimum Age and Procedure of Choice for Elective Surgery in Infancy and Childhood"—Luther A. Longino, Jr., Boston, Mass.

"Urinary Tract Infections"—Gerald H. Teasley, Texarkana.

FIRST SESSION, HOUSE OF DELEGATES**Monday, April 23, 1951**

The meeting was called to order by President Hunt at 4:00 P. M.

The Credentials Committee (J. M. Kolb, Fount Richardson) reported that the credentials of the delegates present had been examined, found correct and that a quorum was present.

By motion (W. R. Brooksher-Ed Gray) credentials were accepted in lieu of roll call and the following delegates and county society members seated as delegates were present by action of the House of Delegates:

ARKANSAS—R. H. Whitehead, Sr.; ASHLEY—M. C. Crandall; BENTON—Lee A. Dean; BOONE—J. G. Gladden; BRADLEY—W. J. Hunt; CARROLL—J. F. John; CHICOT—J. H. Burge; CLEVELAND—W. G. Hancock; CRAIG-HEAD-POINSETT—A. C. Modelevsky, Joe Verser; CROSS-ST. FRANCIS—A. F. Barr; DESHA—H. T. Smith; FAULKNER—C. H. Dickerson; GARLAND—L. E. Reed, E. R. Browning, J. L. Rosenzweig; GRANT—Miles F. Kelly; GREENE-CLAY—J. M. Williams, J. B. Futrell; HOT SPRING—M. C. Berry; INDEPENDENCE—C. A. Taylor; JEFFERSON—E. F. Reed; JOHNSON—J. M. Kolb; LEE—F. S. Dozier; LINCOLN—C. W. Dixon; LITTLE RIVER—J. G. Shelton, Jr.; MADISON—Charles Beeby; MILLER—H. E. Murry; MONROE—E. D. McKnight; OUACHITA—J. L. Dedman; PHILLIPS—W. B. Connolly; POPE-YELL—Roy I. Millard; PRAIRIE—J. C. Gilliam; PULASKI—T. D. Brown, E. F. Gray, E. J. Easley, John Samuel, Robert Jones, Alfred Kahn, R. E. McLochlin, Hoyt Choate, H. Ray Fulmer, W. E. Morris; SEBASTIAN—T. P. Foltz, D. W. Goldstein; UNION—J. H. Pinson, W. H. Handley, Jr.; WASHINGTON—J. W. Dorman; WHITE—M. C. Hawkins, Jr.

Other members of the House of Delegates present were:

President Hunt, President-Elect Henry, Treasurer Dan Autry, Secretary Brooksher, Councilors J. J. Monfort, S. A. Drennen, Louis K. Hundley, John H. Wilson, R. C. Dickinson, D. L. Owens and Fount Richardson; Past-Presidents L. T. Evans, O. J. T. Johnston, R. B. Robins, L. J. Kosminsky, S. J. Allbright, H. T. Smith, M. L. Norwood, H. King Wade, A. S. Buchanan and Joe Shuffield.

Fraternal Delegate S. W. Colquitt from the Mississippi State Medical Association introduced

himself and brought greetings from his Association.

Mr. Bill Davenport of the University of Arkansas School of Medicine, member of the Executive Council of the Student American Medical Association, introduced himself and briefly explained the aims and purposes of the Student American Medical Association and its relationship to state medical societies.

By motion (Drennen-Rush) the minutes of the Seventy-fourth Annual Session as published in the June, 1950, issue of the Journal of the Arkansas Medical Society were adopted as correct.

R. B. Robins was called to the speakers rostrum and was presented an engraved silver tray by President Hunt, who explained that the gift represented Society members' appreciation to Robins for his outstanding work in behalf of the medical profession. Mrs. Robins was then invited to the rostrum to receive an orchid, presented also by President Hunt.

Committees of the Society then reported in order, each report being referred either to Reference Committee No. 1 (H. T. Smith, McGehee and Robert Hyatt, Monticello) or to Reference Committee No. 2 (Roy I. Millard, Russellville and J. W. Dorman, Springdale).

COMMITTEE ON ARRANGEMENTS

CHARLES R. HENRY, Chairman

It is with great pleasure that the Pulaski County Medical Society welcomes you to Little Rock for the 75th Annual Session of the Arkansas Medical Society.

The Committee regrets that there are no scientific exhibits this year because of the limited space and because of the prohibitive rates charged by the Hotel Marion for exhibit space. The rent on space alone would have cost over \$300 and the construction of booths approximately another \$150. Because of the limited space for commercial exhibitors here in the Hotel Marion, we have only fifteen exhibitors with a total revenue of \$1,434. Twenty additional exhibitors requested space but were refused with a loss of revenue of \$2,000.

The Committee regrets that the tickets for the dinner and dance will be \$5 a person. Since we have loss of revenue, there are insufficient funds in the treasury to pay several of the outstanding obligations.

Your Committee requests the House of Delegates to consider this \$2,000 loss of revenue when deciding the date for the next annual session. As you know, it is impossible to have the exhibition hall of the Robinson Auditorium for a meeting of Monday, Tuesday and Wednesday.

The golf tournament will be held Tuesday at 1:00 p. m. at the Riverdale Country Club. Those wishing to compete should report to the Golf Shop at the Riverdale Country Club for registration. Prizes will be awarded at the intermission of the dance on Tuesday evening.

The Pulaski County Medical Society will be hosts to the Arkansas Medical Society at a social hour at 6:00 p. m. the 24th of April in the Coach and Colonial

Rooms on the Mezzanine. This event immediately precedes the dinner and dance.

I wish to thank Doctors Gordon Oates, Woodbridge Morris, Walter Faust, Alfred Kahn and Mr. Sid Wrightsman, Jr., for their untiring efforts in preparation for this meeting.

SCIENTIFIC EXHIBITS COMMITTEE

JAMES H. GROWDON, Chairman

The scientific exhibits section of the 1951 State Medical Society meeting has been allotted space on the mezzanine floor of the Hotel Marion in Little Rock. There will be room available for approximately twelve exhibits in booths of about 12' x 8' with some additional space for smaller displays not requiring a booth.

The Committee has contacted by letter last year's exhibitors, the presidents of county medical societies, various state and federal agencies and hospitals, clinic groups, and the departments of the medical school, inviting interested parties to participate. At the present time twelve exhibitors have been assured space in the section. The committee will attempt to accommodate any further requests made prior to April 10, 1951. Interested parties are urged to submit their request at the earliest possible date.

The Committee wishes to recommend that in future meetings the scientific exhibits section be allotted space that is in close proximity to the meeting hall and commercial exhibits. Isolation on a different floor of the hotel discourages the interest of the exhibitors and those desiring to view the exhibits.

The provision of booths for exhibitors by the Society is highly commended. The Committee hopes this practice will be continued.

Chairman Growdon, in amending his published Committee report, stated that his Committee:

1. Deplores the necessity of eliminating this year's exhibits.

2. Wishes to officially express its gratitude to those individuals and organizations who had offered to prepare an exhibit for this year's meeting.

3. Suggests future meetings be held where facilities will permit adequate space for the scientific exhibits in close proximity to the general assembly hall.

4. Recommends adequate financial means be given the committee for construction or rental of exhibit facilities.

COMMITTEE ON MEDICAL LEGISLATION

JOE SHUFFIELD, Chairman

Overshadowing all other questions in importance during the 1951 session of the General Assembly was the enactment of a law which will provide funds for the construction of a University hospital, thus establishing our medical school on a firm basis. This law will provide revenue of about two million dollars a year, beginning July 1, 1951, and with the \$800,000 now in the State treasury to the credit of the Medical Center fund, plus the half million dollars provided by the Buchanan estate, an entirely adequate teaching hospital can be constructed. This \$1,300,000 now on hand, together with the 2c tax on cigarettes which the fund will receive after July 1st, will permit the payment of contractors' estimates for construction of the State Medical Center as and when such estimates are presented for payment.

The Act which provides the revenue declares that it shall be used for the purposes set forth in Act No. 249 of the laws of 1951. That law authorizes and directs the State Hospital board to convey to the trustees of the

University of Arkansas, title to certain lands described, which are adjacent to the Little Rock unit of the State hospital. The law then directs the trustees to proceed with the construction of the hospital.

Our Medical school has an impressive record of training doctors who have been as well equipped for their profession as any in the nation, and it has done this even without adequate training facilities. How important this added facility will be to the people of Arkansas is shown by the fact that of all physicians now licensed to practice in Arkansas, 39 per cent are graduates of the University of Arkansas, School of Medicine. The clinical facilities provided by the present University hospital are adequate for no more than 60 students per class. The new 400-bed hospital will provide facilities for 100 students per class, and much better facilities for teaching and laboratory work will be afforded.

It is necessary that funds which accumulate in the treasury be appropriated every two years, and in anticipation that the revenue for the University hospital would be provided, we previously secured the passage of a suitable appropriation bill, which was S. B. 420, now Act No. 329—1951.

We favored the passage of H. B. No. 149, now Act No. 155—1951, providing for reimbursable cost from the Welfare fund, for hospitals. The old law, Act 115—1937-1943, provided that no hospital may be paid not less than \$3.00 per day, nor more than \$5.00 per day for care of cases certified as indigent by the Welfare Department. No change had been effected in the basis of payment for care of such cases since 1943, although hospital costs have pyramided since then, and are still continuing steadily to increase. The result of the hospitals rendering all-inclusive care to this group of patients at a figure substantially below the actual cost of care resulted in a deficit which was required to be absorbed and paid by other patients.

A bill was presented by Mr. Turner of Miller County, and became Act 184 of 1951, which prohibits the sale or dispensing of barbituric acid or derivatives thereof except by wholesale houses to hospitals or retail pharmacies, and by retail pharmacies on the written and signed prescriptions of a person holding a license issued by one of the medical boards, and also excepting those preparations intended for nasal or other external use. An oral or 'phoned-in' prescription to a pharmacist must be confirmed within 72 hours by such prescriber.

There had been a similar law in effect for a number of years, and this new law, it is believed, so carefully closes loopholes that it will be necessary for a strict observance of this law.

H. B. 206, now Act No. 398—1951, establishes the office of State Medical examiner, under the direction of a board, the director to be the head of the department of pathology of the medical school. There shall be established under his direction, a laboratory for autopsies. Upon the death of a person by violence, or suddenly when in apparent good health, or when unattended by a physician, or in any suspicious manner, the coroner or the director shall be notified by the physician in attendance, or by any law enforcement officer, and then if the coroner or director deems it to be in the public interest, an autopsy shall be performed by the State Director. The cost of transporting the body shall be borne by the county where the death occurred. A report of the cause of death shall be made by the Director, but no provision is made for paying for the services of the pathologist.

During the last days of the session there was introduced a House Bill No. 456 to provide for licensing physical therapists. The board was to be appointed by

the Board of Examiners of this Society. To be eligible for registration the applicant was required to have been graduated by a school approved by the appropriate sub-committee of the American Medical Association, or by a school approved by the Board, the course of instruction to include anatomy, physiology, pathology, psychology, and physical therapy as applied to medicine, surgery, neurology and pediatrics. This bill did not get far enough along to be voted upon.

It would probably be well for this bill to be studied by interested parties, so that recommendations could be made to succeeding sessions.

It is perhaps known to all that our revised medical practice bill failed to pass in the Senate. This was perhaps largely due to two stringent provisions in the bill, one which provided that the examining board should have the right to imprison a witness for refusing to answer such questions as he would be required to answer in a Court. It was believed by the Senate that only a Court should have authority to order imprisonment.

The other provision which was considered radical by the Senate provided that an injunction be issued upon the verified petition of the board of examiners, without a hearing. Although the bill provided for an appeal to a Court, it was thought by some Senators that an irreparable injury might be done to a practitioner if an injunction was granted against him, even though it was later abrogated.

If a similar bill is again presented, those two provisions should receive careful study.

This bill did not have the unanimous approval of the members of this Society, and the criticism of the bill by doctors did much to keep it from passing. We often had to turn from our endeavor to convince the members, to fight those doctors who were criticizing the bill to their legislators. This creates an intolerable situation, and it is one that should never be repeated. Those who are endeavoring to carry out the instructions of the House of Delegates should receive the support of all our members, or at least no adverse comment should be made to members of the Legislature. It is all right for our members to disagree with suggestions made by the Council or House of Delegates; but when the decisions are finally made, the Legislative Committee should receive the support of our membership. Otherwise the Committee will lose its effectiveness. When we discuss our bills with a Senator or Representative and ask for his approval, it is very discouraging and embarrassing to the Committee to hear him say that the doctors of his county are opposed to the bill. That is what happened to us during the past session.

Of course there are bills which are to some extent unknown to the membership, such as the Ophthalmic Dispensing Bill, which have not been generally approved by our membership and to which the foregoing rule would not apply. However, the proposed Medical Practice Act was not in that category, because the House of Delegates directed us to cause it to be introduced and to endeavor to get it passed.

United, we can accomplish almost anything. But division in our ranks is bound to bring defeat.

The progress made for our Medical School ought to be sufficient to erase all thought of discouragement.

By motion (H. T. Smith-M. L. Norwood) Chairman Shuffield was commended for his Committee's outstanding work at the recent State Legislature.

Mr. Eugene Warren requested that he be al-

lowed to give his Report as Legal Counselor, its contents having a bearing on the Report of the Medical Legislation Committee.

LEGAL AFFAIRS COMMITTEE

W. J. BUTT, Chairman

This Committee has had one formal meeting during the year . . . a joint meeting with the State Board of Examiners and the Council. No independent action was taken by this Committee: its function at that meeting being that of liaison and recommending group between the State Medical Board and the Council of the Society.

There have been no matters of a medico-legal nature referred to this Committee for investigation or action.

There have been no cases of violation of the Medical Practice Act referred to this Committee for investigation or action.

We offer no changes in recommendations submitted in the last previous annual report of the Legal Affairs Committee.

MEDICAL SERVICE COMMITTEE

J. A. HENRY, Chairman

The committee has little to report this year. At the 1950 meeting of the State Medical Society, it endorsed a proposal recommending that legislation be enacted to finance needy medical students and that those receiving aid, return to rural communities having need of a physician.

During the recent Governor campaign, the committee contacted both candidates and attempted to obtain their endorsement of this proposal. Unfortunately, the successful candidate turned down the program; and for this reason, plus the financial condition of the state and the unsettled world condition, this legislation was not placed before the present legislature. It is believed that if conditions should prove to be more opportune in the future that this proposal be placed before the legislature for their consideration.

The Medical Service Committee met with the Military Medicine Committee concerning Civilian Defense, this meeting taking place during the month of December.

The work of this committee is still in a formative stage and we have nothing to report as far as any definite steps that are to be taken. However, this committee stands ready to do all that it can to be of assistance to the State in any civil defense program which will be enacted in the future.

MILITARY MEDICINE COMMITTEE

EWING M. NIXON, Chairman

On May 6, 1950, the Chairman of the Military Medicine Committee attended a meeting at the headquarters of the American Medical Association in Chicago, which was designed to aid the states and territories in their Civilian Defense Planning. This meeting occupied the entire day and was very instructive. In this meeting many civilian defense problems were discussed and it was noted that the state of Maine had made considerable progress towards an active Civilian Defense Program. In addition, many of the chemical and explosive results of atomic weapons were discussed. There was present at this meeting representatives of the American Medical Association, the Health Resources Division of the National Security Resources Board, the United States Veterans Administration, the Atomic Energy Commission, and the Department of Defense. There were present numerous con-

sultants to the American Medical Association and it was at this meeting that Dr. James C. Sargent gave his definition of Civil Defense, which I think is the best yet promulgated. He stated that "Civil Defense, down to its essence, means the organization of the civilian population to minimize the affects of enemy action."

In July, 1950, the Oklahoma State Medical Association in a communication to the Arkansas State Medical Society, called attention to the possibility of a large number of our doctors holding reserve commissions being called into active military service irrespective of their length of previous service. The Council of the Arkansas State Medical Society met on Sunday, July 30, 1950, and it was at this meeting a resolution was enacted which was immediately forwarded to Senators and Representatives requesting that physicians be called for military duty, in the following order, unless they desire immediate active duty:

1. Physicians educated at the expense of the government, who have had no active military service.
2. Physicians trained at their own expense, but deferred from active service to gain their education.
3. Physicians deferred from active service because of minor physical defects, who were able to carry on private practice during World War II.
4. Veterans of World War I and II in reverse ratio to their length of active service.

Soon after, Congress set forth laws governing the entrance of doctors into military service and the majority of the above recommendations were approved.

In July, 1950, the Governor of the State of Arkansas, had printed a State Civil Defense and Emergency Plan, and later during 1950 Maj. Carl C. Martin was appointed as State Civilian Defense Director, and he in turn appointed Dr. T. T. Ross as Medical Director of the Civilian Defense Program. On December 7, 1950, the Chairman of the Military Medicine Committee met with Drs. Ross and Washburn of the State Health Department, and plans were made for a meeting of the Military Medicine Committee as a whole with Dr. Earle Hunt, President of the Society, Dr. Charles R. Henry, President-Elect of the Society, for a meeting on December 14, 1950, to discuss matters pertaining to the medical aspect of the State Civil Defense Program. As the result of that meeting, a State Civilian Defense Committee of the Arkansas Medical Society was appointed jointly by Drs. Hunt and Henry. This committee is composed of Drs. Peter O. Thomas, Chairman; Benjamin B. Wells, Ewing M. Nixon, Edwin F. Gray, Robert W. Ross and M. J. Kilbury, Sr. It will be noted that this is a small committee, that all members are centrally located, and that they may easily attend called meetings by Dr. Ross, and also represent various specialties concerned in Civilian Defense from a medical standpoint.

In addition, on December 14, 1950, Dr. Ross appointed the Health Resources Committee, which is a large committee and contains representatives from the State Medical Society and allied facilities. This is an extremely large committee and its initial meeting was held January 30, 1951, at the State Board of Health. At that meeting the purposes and plan of the Medical Section of the State Civilian Defense Program were outlined and each department's duties were designated.

The Civilian Defense Committee of the Arkansas Medical Society will have frequent meetings and in conjunction with the University of Arkansas School of Medicine staff, a training program for the doctors of the state is to be instituted for the care of the sick and injured. As far

as possible, in these discussions, the treatment of fractures, shock, burns and radiological injuries will be standardized in order that better treatment will be afforded the casualties from such a disaster.

VETERANS ADMINISTRATION COMMITTEE

DANIEL AUTRY, Chairman

The Committee wishes to call to the attention of the members of the Society a few of the details in the handling of diagnosis and treatment of veterans that the administrative officials of the Veterans Administration locally feel will make it mutually beneficial for both the doctor and the Veterans Administration.

It is necessary that all prescriptions written to care for the medical needs of veterans be dated within the period authorized for treatment. Any prescriptions written by physicians for a veteran outside of a period of time that has been authorized for treatment will be charged back to the physician issuing the prescription.

In making reports of treatment on Form VA 10-2690-A in the column in which the type of treatment rendered is reported, it will be most helpful for the physician to state fairly specific types of therapy or medicine rather than to use some such phrase as, "treated by medicine." More specific information than this results in the report being approved and authorized more quickly so that the physician receives his payments more quickly.

Under present regulations of the Veterans Administration it is required that every veteran who has been under continuous medical care or treatment for a period of six months or longer be brought to the Regional Office for examination and evaluation as to his condition and as to his treatment. The Veterans Administration officials have stated that they hoped that the local physicians will see the possible benefit by such re-evaluation, since a complete report of findings and any suggestions will be forwarded to the home physician. It is their desire that such an examination will be considered as a type of consultation which is required under present laws and that it is not just that the Veterans Administration wants to check up on the home doctor. As a matter of fact, from time to time the home physicians have requested on their own that such an evaluation be made. The Veterans Administration officials further state that by these re-evaluation examinations they are not trying to dictate methods of therapy, but they hope that any suggestions will be beneficial both to the patient and to the home doctor.

The Veterans Administration has further requested that in ordering therapy that the home physician would order medication that can be taken by mouth wherever possible in place of intravenous medication in those cases where the oral administration of drugs will be just as efficient as the intravenous use. Also, where oral medication is to be recommended for a period of several months, the Regional Office can make arrangements to send the medicine to the veteran, thereby causing a considerable saving in their drug bill.

INDUSTRIAL HEALTH COMMITTEE

SAMUEL B. THOMPSON, Chairman

The Committee submits the following recommendations:

(1) That the Committee be enlarged to include an internist, dermatologist, a member of the staff of the State Health Department, two or more general practitioners who are part time industrial physicians (if such are available), surgeon, ophthalmologist and orthopedist. It is also recommended that this personnel be appointed for

terms of various lengths, so that some continuity of the work of the Committee may be carried over from year to year.

(2) That each county medical society, where there is a considerable amount of industry, organize a Committee on Industrial Health within the county medical society.

(3) That the State Committee promote the organization of such county committees by such measures as sending speakers to meetings of the councilor district and county medical societies.

(4) That the chairmen of the county committees seek guidance in their tasks from the State Committee.

(5) That liaison be established with the State Industrial Nurses Association and a representative of this group sit with the Committee in its function.

The following objectives for both the State and County Committees is submitted as follows:

(1) To promote awareness by the medical profession, employers, and employees of the value of conserving industrial health.

(2) To promote improved relationships between the medical profession and all agencies, groups or persons interested in industrial health in the State.

(3) To promote professional and lay education in, and adoption of, accepted methods of reducing the frequency and severity of occupationally connected disabilities.

(4) To promote improvements in legislation affecting the health of employed persons.

(5) To work in full cooperation with the Industrial Health Section of the State Department of Health.

The following projects are listed as examples of functions the County Committees might undertake:

(1) Encouragement of small industries to establish wash rooms with hot water.

(2) Provision of reading racks containing health pamphlets at some center where employees congregate in plants.

(3) Encouragement of plants to organize for emergencies or catastrophies with definite plans made for calling of ambulances, and arranging hospital beds, and obtaining medical attention with the greatest efficiency.

(4) Designation of some individual as a first aid man as an additional duty to his regular job, where there is not sufficient personnel to warrant a full time first aid man or plant nurse.

MENTAL HYGIENE COMMITTEE

A. C. KOLB, Chairman

Previous reports of this committee have emphasized the magnitude of the mental health problem in this state. There has been no change from the statistical standpoint in this respect since the last report was presented to this Society at the annual meeting one year ago.

Our State Hospital continues to be overcrowded as are other state hospitals throughout the United States. The only hope for improvement in this particular problem, as well as the over-all problem of the tremendous incidence of mental disorders among the people of this country, is an educational program sponsored by state health departments; by organizations interested in mental hygiene; by adequately trained psychiatric personnel in lectures and talks to student bodies and to the public; by properly prepared articles on mental health for publication in the newspapers over the state and over the signature of the Committee on Mental Hygiene of the Arkansas Medical Society. The latter plan would reach many more people than either of the other plans mentioned but all working in the same direction would accomplish much toward reaching the desired goal.

The distribution of literature in the form of pamphlets on the subject of mental health by the state health department and mental hygiene societies would be another media for disseminating information to the public. The Louisiana Society for Mental Health has prepared a series of pamphlets on "Prevention of Maladjustments." These pamphlets are being distributed in quantities by the State Health Departments of Louisiana, Texas, Oklahoma, New Mexico, Georgia, West Virginia, Delaware and Alaska. These articles are producing satisfactory results.

Many of our most disabling and fatal infectious and contagious diseases have been conquered in the past through the work of our state health departments with the cooperation of our state medical societies. The chief weapon used was education—enlightenment of the people. We are right now witnessing another demonstration of this type of attack on such diseases as tuberculosis, poliomyelitis, cancer and heart disease. Laymen are heading some of these campaigns. At the time this report was being prepared, we witnessed an unusual incident in Arkansas in the interest of conquering just one disease—poliomyelitis. This was the "Mothers' March" in Little Rock and 100 other towns and cities in Arkansas on January 29th when hundreds of women went forth for one hour in sleeting and sub-freezing weather and called on homes at night and solicited funds for the drive against this disease. We never expect to see such a demonstration in the interest of prevention of mental disorders.

Mental illness constitutes the major public health problem in any state. One-half or more of all hospital beds are occupied by mentally sick patients. At least 50% of all patients who go to any doctor's office seeking treatment are suffering from some kind of emotional disturbances. In spite of these facts, the public at large and the medical profession as a whole display but little interest in measures attacking the problem of prevention of these disorders. No concerted effort in the past has been made by the profession to induce the legislature to appropriate sufficient funds for the operation of our State Hospital above the level of custodial care and poor custodial care, at that. The profession has approved the construction of the Medical Center on the State Hospital grounds in Little Rock. This approval has recently been reaffirmed by both the Council of the State Medical Society and the Pulaski County Medical Society. Whether the legislature provides the funds for the construction of the Medical Center or not, we should continue to demand its accomplishment in the interest of the School of Medicine of the University and the public health of the state.

The School of Medicine of the University of Arkansas now has a Department of Psychiatry and Neurology, chief of which is Dr. William G. Reese who will be on a full time basis, and will assume his duties on March 1, 1951. He succeeds the late Dr. Poe who died soon after his appointment last year. Dr. Reese served as Director of Professional Education in the Veterans Administration Hospital at Perry Point, Maryland, prior to his acceptance of the position in the School of Medicine here. Dr. Edmond Erwin, psychologist, will be associated with Dr. Reese in the work of the Department. He, also, will be on a full time basis. The addition of this Department marks a new epoch in the history of the School of Medicine. It means a more intensive training of the medical students in psychiatry and neurology. These subjects are now taught in the four classes. Clinical training is given the students in the mental hygiene clinic which is operated under the jurisdiction of the Department of Psychiatry and Neurology. Play therapy for maladjusted children

has also been recently instituted in the mental hygiene clinic.

Psychiatrists and neurologists from the Veterans Administration Hospital in North Little Rock, the State Hospital, the Regional Office in the Federal Building and psychiatrists and neurologists in private practice in Little Rock serve on the teaching staff in the Department of Psychiatry and Neurology and also carry on psychotherapy in the mental hygiene clinic as well as instructing the students in this unit of the Department. This accomplishment has developed out of the "Over-all Community Plan" established two or three years ago by Dr. Harold W. Sterling, Manager of the Veterans Administration Hospital in North Little Rock.

We urge every society member to become more interested in the subject of mental disorders because of the tremendous need for a more concerted support of measures directed toward lowering the incidence of the greatest public health problem in the state.

PUBLIC HEALTH COMMITTEE

E. D. McKNIGHT, Chairman

There has been no smallpox in Arkansas for two years. Universal vaccination as advocated by the health department will assure us that no epidemic of this disease will again occur here. Poliomyelitis was epidemic in 1949 and was prevalent in some sections in 1950. This epidemic disease occurs in cycles. Progress has been made in the last two years in providing more adequate hospitalization for the victims of this disease. The fight on malaria has continued unabated and this disease is no longer the major cause of illness in this state. Vigilance is necessary to see that transmission of this disease is held at a low level. The incidence of typhoid fever has remained low, with only three deaths reported as due to this cause in 1950.

During 1950, through the venereal disease control efforts of the Arkansas State Board of Health, local county health departments and licensed physicians throughout the state, Arkansas has experienced an appreciable decline in its venereal disease rate. At the present time Arkansas is enjoying the lowest venereal disease rate in its history. In 1949 approximately 17,881 cases of all venereal diseases were reported by all reporting sources; in 1950 approximately 12,402 cases were reported. These totals, as compared to the 24,442 cases reported in 1948, are indeed encouraging.

The cooperation of private physicians of the state in the enforcement of the prenatal law which requires that all expectant mothers be examined for syphilis and have a blood test for the disease has been a great aid in further reducing the incidence of congenital syphilis.

The state is badly in need of a pre-marriage physical examination and blood test for syphilis law. We are one of nine remaining states that do not have in effect this basic public health law. This law and its enforcement would be an additional aid in still further reducing the over-all state venereal disease rate. We now know that continued application of intense control efforts supplemented with present rapid treatment will one day further reduce the rate to less than twenty cases per annum per 100,000 population, the desired low rate when the venereal diseases will no longer be a public health problem.

In the Division of Maternal and Child Health, the nutrition program has expanded by one-third and the program for vision and hearing testing of school children has tripled since January 1, 1949. Nutrition consultation service has reached 52 counties and hearing or vision programs were added in 29 counties. Pediatric and obstetric consultation service has been established to assist

the physicians and public health nurses who gave educational and preventive services to approximately 3,500 mothers and 18,000 children per year in each of the two years. Post-graduate instruction in pediatrics or obstetrics was provided approximately 320 practicing physicians in the state. Scholarships were furnished four nurses for post-graduate training in premature nursing; two for advanced obstetric nursing; one each for training in midwifery and public health nursing. Three other scholarships were granted for courses in public health nutrition, public health education, and vision and hearing testing procedures. Programs for midwife control and for care of premature infants were continued. Health work for children of school age was strengthened. Four summer work conferences for teachers were held and a joint committee with department of education staff established. More than 8,000 school children were given complete series of sodium fluoride treatments for reduction of tooth decay.

The Division of Tuberculosis Control during 1950 has held chest X-ray survey clinics in 530 communities in the state: In these clinics, 186,572 persons were X-rayed, and approximately 650 cases of unsuspected pulmonary tuberculosis were initially discovered in this manner. Approximately 3,000 individuals were referred back to their family physician for the further investigation of chest conditions. It is to be pointed out that approximately 65 types of pathology other than tuberculosis may be revealed by a chest X-ray, and there is actually a greater proportion of non-tuberculous cases discovered than the specific disease for which this program was originally designed.

Intensive, block-by-block X-ray surveys have been conducted in Jefferson, Sebastian, Phillips, Garland, Benton, Poinsett, and Independence Counties. Over fifty percent of the adult population in each of these counties was X-rayed.

The central tuberculosis case register now contains the names of almost 9,000 persons who are either actively ill of tuberculosis or who still require medical supervision. This register, now in its fifth year of operation is beginning to reveal some very interesting facts. It is of interest to note that almost half the persons dying of tuberculosis die in the home. Since these terminal cases are usually highly infectious, a grave potential spread of the disease is thus produced. It should also be noted that only one-fifth of the newly reported cases of tuberculosis are being reported by the practicing physicians. This means that of the approximately 2,000 cases reported for the first time in 1950, only about 400 of these were reported by the family physician, the individual who is primarily charged with the reporting of such cases. One appalling thing is that ten percent or 200 of the new cases reported during the year were first reported by death certificate. This means that these cases ran their course from start to finish without any public health supervision.

The death rate from tuberculosis continues to decline, but the number of newly reported cases still approximates 2,000 a year. With this terrific morbidity the fight is far from won, and the constant awareness of the private practitioner to this pressing problem is urgently needed.

During 1950 services offered by the Division of Industrial Hygiene were provided to approximately 16,500 industrial workers through 148 plant visits to a total of 131 different plants. The basic program continues to be the detection, evaluation elimination of occupation health hazards. The dissemination of basic health information as applied to industry has been stressed through

regular articles in the state health bulletin which is made available to all plants. Plant surveys and technical studies, including field determinations and laboratory analyses, continue to be primary functions. In addition, personnel of this division have received basic training in radiological monitoring and health problems arising from research and industrial use of radioactive materials.

During the past fiscal year, the Hygienic Laboratory has performed 286,202 tests on 241,965 specimens. Our clerical division types and checks out approximately 1,000 reports per day. Approximately 300,000 cc of typhoid vaccine for free distribution to the cities and counties has been prepared in the laboratory. This amount of vaccine is sufficient to immunize 120,000 persons and would cost about \$15,000 if purchased from commercial manufacturers. The complete laboratory staff consists of twenty-two persons.

In the bureau of sanitary engineering 102 sets of plans and specifications were reviewed and approved for water and sewerage systems and swimming pools or major improvements to existing systems and pools. The cost of these proposed improvements is estimated at \$7,242,000. New water and sewer systems and swimming pools and major improvements to existing ones during this period cost approximately \$7,226,000. Included in the above improvements and construction were four complete water systems, seven sewage treatment plants and eleven new swimming pools. This department played an active part in bringing about these improvements.

The year 1950 found the food and drug division able to give much better coverage to all of its programs. Two principal factors were responsible for this progress. First, three previous years of experience in carrying on the divisions' work has made us much more familiar with the problems we need to deal with. Second, a better trained staff of sanitarians working out of local health departments has been the other contributing factor.

The food and drug laboratory analyzed a total of 373 samples of food and drugs during the year 1950. Twenty-four per cent (eighty-nine samples) proved to be violative, and legal action was taken, when necessary, to prevent the sale or use of the unfit food or drugs. This reflects a great improvement in the field of food and drug adulteration violations, as 189 of last year's 420 samples analyzed were found to be violative. This is a decrease from 43 to 24 percent in the number of foods and drugs found to be adulterated by the presence of filth, illegal chemicals or other such substances.

Nine hundred and twenty-five dairy barns, and seven pasteurizing plants were constructed at a cost of \$1,000,000.

Three thousand two hundred inspections were made in the sanitary supervision of the processing and manufacturing of:

- 13,000,000 pounds of cheese
- 7,250,000 pounds of butter
- 310,000,000 pounds of evaporated milk
- 2,518,000 pounds of ice cream.

An intensive malaria control program was conducted in 38 counties during the past year. This program included the spraying of 65,315 houses with DDT. Larvacide application, in towns and densely populated areas, to 4,000 miles of ditches and streams, 7,200 acres of ponds and lakes. It promoted and assisted in the rat proofing of 230 establishments, distribution of rat poison in eight areas, and the establishment of organized garbage collection and disposal systems in seven towns. The malaria and typhus control program was financed largely by the \$190,000 from voluntary participation. The major accomplishments indicated above under the various di-

visions of the bureau of sanitary engineering do not include a large amount of time spent on routine activities, such as public health education, regulatory and promotion and sanitary surveys.

In 1950 the Bureau of Vital Statistics processed approximately 161,000 applications, despite a 22% personnel reduction. The work load in 1950 increased approximately 100% over 1948.

Eight construction contracts were awarded during 1950. The contracts amounted to \$9,656,000 for 559 beds classified as general hospitals. Thirteen projects have been completed including three state units constructed for the state hospital for mental and nervous diseases, these units being a 100 bed tuberculosis unit at Little Rock, a cold storage plant at Benton, and a laundry unit at Little Rock. The other ten projects are general hospitals with 534 new beds and a total value of \$4,820,500.

COMMITTEE ON THE AUXILIARY

R. B. ROBINS, Chairman

The Woman's Auxiliary to the Arkansas Medical Society under the leadership of its President, Mrs. Warren S. Riley, has done a splendid job for medicine in Arkansas during the past year.

The President developed a handbook for officers and committee chairmen which has been acclaimed the most helpful and successful guide that has ever been used by the Auxiliary. This handbook has been highly praised by the National officers. It has served as a tangible source of help and aid to the work of the Auxiliary and the President is to be complimented for this innovation. She has also developed a Statistical Report which has been used for the first time. This form has been very helpful in making a systematic compilation of achievements in an orderly and compact form.

Two new Auxiliaries have been organized during the past year—Clark and Boone Counties. There are now a total of 25 auxiliaries organized in Arkansas. The total membership last year was 658. Many young doctors' wives, who have not been members before, have been enrolled this year and we are confident that the final report will reveal more than 700 members.

Your Committee would like to call special attention to two comparatively new activities of the organization this year: (1) Radio Health Programs. An effort has been made to see that each of the 33 radio stations in Arkansas has carried some type of health program each week as a public service feature; (2) Interprofessional Relations Meetings. Each Auxiliary has been asked to hold one time during the year an interprofessional relations meeting at which time physicians, dentists, druggists, voluntary insurance salesmen and their wives would get together for a dinner and social meeting.

We feel that the Woman's Auxiliary has done and is doing a very fine job in Arkansas and we hope that they will be encouraged in every way possible by the officers and membership of the Arkansas Medical Society to continue their valuable work.

In amending his printed Report, Chairman Robins presented the following addendum:

Your Committee on the Auxiliary would like to make the following supplemental report in the form of five recommendations:

1. Very close liaison between the Secretary's office and the Auxiliary officers in regard to alerting the Auxiliary officers regarding their duties, attendance at meetings, etc., so that the Auxiliary officers may perform more adequately their work in the Society's behalf;

2. Allowance of \$175 for printing of the minutes and

reports for the year;

3. A travel allowance of \$500 for the President and \$100 for the President-Elect should be continued;

4. Allowance of \$25 for membership in the Arkansas Legislative League, provided the Arkansas Medical Society continues its membership;

5. Allowance of \$100 for radio health programs on a statewide basis for 1951-52. (This amount to be checked against by State Radio Chairman when needed for express charges to return films to A.M.A. headquarters from radio stations in counties where there are no organized auxiliaries; or where organized auxiliaries refuse to pay return express charges on radio material. The express cost averages approximately \$2.50 per set. This money is also to be used in covering other necessary expense in connection with this program).

COMMITTEE FOR EXTENSION OF MEDICAL CARE

H. W. THOMAS, Chairman

The Committee for Extension of Medical Care, more commonly called the EMC Committee, met at intervals during 1950-51 at the Albert Pike Hotel, Little Rock. Frequent telephone and telegraphic communications among the committee members served to augment the formal meetings. Because of the nature of the committee's work, this must continue to serve as a means of keeping the committee members, and through them the profession as a whole, aware of current and anticipated activities of certain elements within our government, who seek to destroy the private practice of medicine.

This committee, which was established in 1949, is charged with the responsibility of directing the efforts of the Arkansas Medical Society against "socialized medicine" in its multitude of disguises and camouflages.

There are men in high position in our government, who have shown utter disregard for the expressed will of the great masses of the American public—men who have a ruthless determination to seize unprecedented, unwarranted and unconstitutional power — men who will use every conceivable scheme to acquire more power and control over the private practice of medicine and all private enterprise.

Your EMC committee, with members from all Council Districts was established to spearhead the drive of the medical profession of Arkansas against these forces.

Invaluable help has come from the members of the Auxiliary throughout the state. Four representatives of the Auxiliary are members of this committee.

During the past year, our efforts were directed against compulsory health insurance, federal aid to medical education, broadening of the Social Security program and against numerous camouflaged and disguised programs, which purported to meet a dire need (i.e. the National School Health Service Act) but which in reality represented just so many more angles of the "power grab" efforts of such men as Oscar Ewing.

The EMC committee is that arm of your State Society, which activates the program of Whitaker and Baxter of the A.M.A. on the state level in Arkansas. During the past year, Dr. Ralph Gampell's visit to the state for a series of lectures to lay and professional groups on the evils of the British state medicine program was arranged for by this committee. Tie-in advertising stating medicine's case to the people of Arkansas likewise was promoted with success. At present the State Auxiliary is conducting a campaign at the request of this committee to have the Harding College "Freedom Films" shown to every County Society and Auxiliary in the State.

The committee feels that during the past year our profession has made definite gains in mustering public opinion to our support. We feel that we might even have awakened a few slumbering physicians to the dangers that confront us, but we realize full well that the fight has just begun and that money, time and effort must continually be poured into our campaign, if we are to continue as a free profession in a free land.

RURAL HEALTH COMMITTEE

JOE W. REID, Chairman

The Rural Health Committee during 1950 has—

1. Actively supported drives in eight counties for the voluntary pre-paid hospital & medical insurance plans.
2. Organized a few health councils.
3. Supplied display booths in county fairs, giving literature and information concerning the work of our State Health Department and information about voluntary

The Committee recommends the establishment at our versus compulsory health insurance. Medical School of lectures to be given to seniors concerning advantages of practicing in small towns and rural counties. This, we believe, should be given by someone actively engaged in this work.

POSTGRADUATE STUDY COMMITTEE

C. RANDOLPH ELLIS, Chairman

Your Postgraduate Study Committee has arranged with the University of Arkansas School of Medicine to have postgraduate courses of 1-3 days' duration offered at intervals of 2-3 weeks throughout the regular school term. Some of these courses are lectures only; others include lectures, clinic and hospital teaching. The tentative schedule of these courses is as follows:

SCHEDULE OF POSTGRADUATE COURSES 1950-51

Date	Department	Head of Dept.	Number
Oct. (1st half)	Obstetrics & Gynecology	Willis E. Brown	15
Oct. 27	Academy of Gen. Prac.		No limit
Nov. 6-7	Pediatrics	W. A. Reilly	No limit
Nov. 13-16	Southern Med. Society		
Dec. (1st half)	Surgery	G. O. Dean	25
Dec. (2nd half)	None to be held		
Jan. (1st half)	Obstetrics & Gynecology	Willis E. Brown	15
Jan. (2nd half)	Tuberculosis		No limit
Feb. (1st half)	Medicine	B. B. Wells	30
Feb. (2nd half)	Mid South		
Mch. (1st half)	Surgery	G. O. Dean	25
Mch. (2nd half)	Obstetrics & Gynecology	Willis E. Brown	15
Apr. (1st half)	Radiology	I. Meschan	
Apr. 23-25	State Society Meeting		
May (1st half)	Pediatrics	W. A. Reilly	No limit
May (2nd half)	Obstetrics & Gynecology	Willis E. Brown	15
June (1st half)	Surgery	G. O. Dean	25

Detailed information may be obtained about each course by writing to the head of the department concerned.

The Arkansas Medical Society meeting and other prominent meetings near us are included in this schedule in an effort to avoid conflicting dates.

Since our 1950 Annual Session, there have been two courses in obstetrics and gynecology, two in surgery, and one in pediatrics. These were all well-attended. The visiting and local speakers presented subjects of interest especially to physicians in general practice. Limiting the enrollment in some of these courses has made clinic and hospital presentation much easier and has greatly increased interest.

The Arkansas Chapter of the American Academy of General Practice held its Second Annual Postgraduate meeting in the Albert Pike Hotel, Little Rock, October 27, 1950. Attendance was good, with 100 physicians present. The program covered many aspects of medicine, surgery,

and obstetrics of interest to the general practitioner.

It is our purpose to expand this postgraduate study program to meet the needs of all members. We urge all members to take the fullest possible advantage of the program already arranged.

We would like to make the following recommendations:

1. That the University of Arkansas School of Medicine be requested to set up a Department of Postgraduate Medicine through which all study courses and lectures may be scheduled and proper records kept.
2. That this committee be notified of all postgraduate lectures or courses planned or requested in the state.
3. That appointments on this committee be made for different periods of service so that it is never composed completely of new members.
4. That the Arkansas Medical Society recommend to the School of Medicine the adoption of plans for a general practice residency program at the earliest practical time.

We express to the Staff of the University of Arkansas School of Medicine our sincere appreciation for their assistance and cooperation in arranging a Postgraduate Study Program.

In amending his printed Report, Chairman Ellis stated that a "proposal for establishment of a Foundation for Post Graduate Medical Education was presented to this committee on April 15, 1951; however, we do not consider our study of this proposal adequate to make any recommendations concerning it at this time. We do recommend that our present program be fully supported and expanded as rapidly as the facilities of our medical school will permit. We further recommend that adequate fees be charged for each post-graduate course to cover the expense of that course."

CANCER CONTROL COMMITTEE

HENRY HOLLENBERG, Chairman

During the past year the activities of this Committee have largely been directed through their association with the State Cancer Commission. Of growing importance are the Tumor Clinics throughout the state which have now received approval of the American College of Surgeons. There is an increasing use of these clinics. The Association of Tumor Clinic Staff Physicians has increased its activities and has had several important meetings with outstanding out-of-state and in-state speakers. Again we have obtained the services of an outstanding out-of-state speaker for the annual meeting of the State Society. This is becoming an annual fixture of our spring meeting.

Members of this Committee have been somewhat concerned at the reported use of Tumor Clinic facilities and other free facilities for diagnosis and treatment by patients who are apparently able to pay. The exact degree of this abuse is not accurately known though we are attempting to investigate and to curtail it. In this connection, it is well for our members to know that the State Cancer Commission now recognizes that the physician who treats the patient is the one who can and should definitely determine their ability to pay. It is therefore agreeable to the State Cancer Commission for physicians who treat patients to make charges when such are in line with the patients able to pay.

TUBERCULOSIS COMMITTEE

JOHN E. GREUTER, Chairman

The Tuberculosis Committee of the Arkansas Medical Society has remained in contact with Dr. J. D. Riley, Superintendent of the State Sanatorium. During 1950-

1951 no current problems have been referred to this committee and no active action has been necessary.

MATERNAL WELFARE COMMITTEE

I. F. JONES, Chairman

The Maternal Welfare Committee wishes to report that the University of Arkansas Medical School in co-operation with the Maternal Welfare Committee, offered a Postgraduate Program at the Medical School during spring of 1950, and is again offering a course in March and May of 1951. These courses seem to be appreciated by the members of the Arkansas Medical Society as reservations for them are at a premium. We feel that these classes should be limited to fifteen registrants and limited to one week. Courses consist of ward rounds, clinics, conferences, lectures and demonstrations. Programs are arranged to insure ample opportunity for informal question periods. Classes begin at 8:00 A. M. and last until approximately 8:00 P. M., with time out for meals.

We feel that these programs have not only aided the practitioners in Arkansas who are doing obstetrics, in material benefit to themselves and patients, but also has brought the University of Arkansas Medical School closer to Society members. It is hoped that these programs in the future will not only be continued, but that more physicians will avail themselves of the opportunity of taking these postgraduate courses.

No further business has come before the Maternal Welfare Committee this year.

CHILD WELFARE COMMITTEE

B. P. BRIGGS, Chairman

1. The question was brought up concerning school health. The Committee recommends that school medical advisors working with a school health committee of the county medical society and the county health department be appointed where feasible. It was further recommended that the above groups use the pamphlet of the Arkansas Department of Education and State Board of Health "A Guide for School Health Program in Arkansas" plus suggested school health policies as outlined in pamphlet of the American Medical Association. This committee approves the program being carried out through the State Health Department and the schools in cooperation with the E.E.N.T. section of the State Medical Society in the conservation of hearing and vision.

2. The Committee was gratified over the reporting of birth weights on the birth certificates. The reporting from a few areas still needs improvement.

3. The Committee noted an increase in neonatal deaths recently and recommended that local medical societies study the neonatal deaths in their localities.

4. The Committee further recommends that individual physicians and local health departments stress early immunization as brought out in recent work whereby routine immunization can be satisfactorily begun as early as the second month.

5. The Committee commends the Well-Child Conferences sponsored by the State Health Department and the local medical societies and believes that these encourage parents to seek further care for children from the private physician.

6. The Committee recommends that in areas where poliomyelitis is treated, as recommended under decentralization of poliomyelitis care by this committee in a previous year, that adequate facilities be provided such as physiotherapy.

7. The Committee feels that present study of the home environment for children with chronic illnesses or disabilities is frequently inadequate. The Committee therefore recommends that better social service studies of the child's home environment be carried out and made available to the attending physician.

This Committee thinks that in many instances convalescent care may be shortened with a lessening of the economic burden, and psychological improvement for the child with better social studies available.

LIAISON COMMITTEE WITH THE ARKANSAS STATE BOARD OF HEALTH

W. B. GRAYSON, Chairman

The State Board of Health and the local health departments throughout the State of Arkansas are charged with the responsibility of protecting the public health, the establishment of sanitary and hygienic living conditions throughout the State, the suppression of infectious, contagious and communicable diseases and the proper enforcement of quarantine, isolation and control of such diseases. There are numerous reasons why, during the past few years, these basic public health provisions have not been carried out on the basis of a minimal adequate standard.

The only way that minimal adequate public health standards and services can ever be maintained in Arkansas is for the state to be covered by an adequate number of full-time local health departments, staffed with well-trained physicians, nurses, and other auxiliary public health workers. At the present time Arkansas falls short of the required number of full-time local health departments. Ten counties are still organized for nursing service only. As of January 1, 1951, local health departments were directed by only eight full-time local health officers and to adequately cover the state a minimum of at least 30 full-time local health officers is needed. At the same time local health departments were staffed by 110 public health nurses when at least 400 public health nurses are needed. At the present time local health departments are served by 55 trained sanitation officers when a total of 130 sanitarians are needed.

The State Health Department has not been in a position to secure the services of professional personnel due to the fact that salaries are far below those of other competitive institutions and facilities. Another major reason for the lack of adequate coverage of local health services through the state is the fact that local units of government have never been in a position to contribute their proportionate share of the expenses and costs of continuing a minimal local health program. Local units of government are badly in need of some provision enabling the general public to vote a millage specifically ear-marked for local public health purposes. At the present time approximately an average of 70 cents per capita is being expended by our local units of government, the State of Arkansas, and the federal government to maintain present local health services when the general consensus of the authorities in preventive medicine is that a minimum of \$1.50 per capita is needed to maintain minimal adequate health services.

Since July 1, 1950, the State appropriations for health services within the state have been curtailed to an appreciable degree. This reduction of state funds was necessitated and imposed on all state agencies through the administration's economic demands. During this period federal funds allocated to the state for health purposes were also greatly reduced through the economic

demands required by the national emergency.

Even though local health services at present are totally inadequate and the total number of professional workers are far below the number needed to maintain minimal adequate services, the demands on such services by the civilian and national defense programs are rapidly increasing. It will be the endeavor of the Arkansas State Board of Health and the local health departments to continue their efforts in the protection of the public health as well as cooperating to the fullest with the civilian and national defense programs.

LIAISON COMMITTEE WITH THE STATE HOSPITAL FOR NERVOUS DISORDERS

W. J. KETZ, Chairman

It has been unfortunate indeed that the presence of mental disease has always struck fear into the hearts of men, for this fear has always distorted their thinking relative to mental and emotional disorders, and has thereby long prevented those suffering from such disabilities from receiving the care and treatment which they have needed.

Because we have for years neglected to offer those suffering from the disabling effects of mental illness proper care and treatment and because we have let prejudices and superstitions hide from us the true scope of the problem of mental illness, we are now as citizens faced with the fact that mental disease has become the nation's number one health problem and that mental and emotional disorders are adversely affecting the socio-economic conditions of this country and are actually interfering with the overall security of our nation as a whole.

In order that we may better understand this problem let us look at some of the facts and figures relative to mental illness in Arkansas. First, it is of interest to know that of the 61,810 patients admitted to the Arkansas State Hospital since 1882, 36,557, or far better than half, have been admitted during the last twenty years. Secondly, that the hospital admitted 2,008 patients during the year 1949 and that we will admit some 2,400 patients and discharge over 1,850 during the year 1950. Third, that our hospital has an overall population of 4,857 patients housed in its three hospital units. Fourth, that many patients in the Arkansas State Hospital have been more or less continuously hospitalized for from 50 to 60 years at a cost to taxpayers of some \$65,000 each. Fifth, that the hospital has within its various units over 150 mentally retarded and deficient children, and 1,140 aged. Sixth, that the number of hospitalized insane in Arkansas will jump from 4,900 to 7,000 by the year 1975 unless some steps are taken to curtail mental illness and that the aged actually needing mental hospital care will increase from around the present 400 mark to 2,400 by 1975. Seventh, that the present methods of treatment have made it possible for the hospital to cut its annual death rate from 640 to 440 in two years and show its patients return rate from 700 per year to 400 in the same period of time.

Those are some of the facts relative to our state mental health problem. To meet this problem the State Hospital has formulated and developed the Arkansas Mental Health Plan in 1949. This plan, which is considered in national circles to be remarkably outstanding, is composed of nine separate phases:

1. The analysis of the actual mental health problem in Arkansas.
2. The establishment of adequate and sufficient hospital

space for the care and treatment of the state's mentally ill.

3. The development of adequate, well trained professional staffs to man present and future hospital facilities.
4. The development of adequate research and training facilities for professional staff members.
5. The development of an efficient and effective plan for overall hospital operation and management.
6. The development of sufficient mental hygiene clinics throughout the state.
7. The development of systems of patient follow-up job placement and patient foster home care.
8. The development of a special hospital for the feeble-minded near enough to a center of learning so that these unfortunates may have the benefit of teachers and thereby be enabled to make some type of social or economic adjustment.
9. The development of special centers and hospitals for the aged with the idea of rehabilitating as many of these unfortunates as possible, and with the idea of offering proper hospital care to those beyond the stage of rehabilitation.

The State Hospital has now, for the first time in its history, been approved by the American College of Surgeons, The American Medical Association and The American Hospital Association. These approvals were granted to us on a tentative basis and will be withdrawn unless the hospital is able to meet the rigid approval standards. These standards cannot be met without additional funds and, therefore, we stand to lose approvals unless adequate budgetary funds are made available for supplies, food personnel, etc., by the Legislature.

We have gone as far as possible with the available funds and we must now decide whether we shall continue to develop our treatment and training facilities and offer equal opportunities for treatment to all patients, or whether we will confine our treatment to a limited few and treat the remainder on an asylum basis. The choice, unfortunately, rests not with the doctors who must work with these patients, but with the citizens, for the doctors can do only what the citizens desire and can carry on treatment only to the extent that funds are available.

HOSPITAL RELATIONS COMMITTEE

A. S. KOENIG, Chairman

The first Committee meeting was held in Little Rock December 17, 1950, in joint meeting with the Committee for re-writing the Medical Practice Act. The principal items of discussion were certain features of the new Medical Practice Act which is to be introduced in the Legislature in the 1951 session. These consisted of (1) a precise definition as to what constitutes the practice of medicine and (2) a provision for the restriction of corporate medical practice within this state. Agreement on the principal contents of these two provisions was arrived at by both Committees. Subsequently these provisions were included in the Act which was approved by the Council for introduction into the Legislature.

A discussion was also held on the recommendation that had been made in the previous annual report about a removal of pathological, radiological, anesthesiological and psychiatric service from the present Blue Cross Insurance Policies. It was agreed that this recommendation be re-introduced at the next meeting of the House of Delegates, but should be re-worded to include all voluntary types of insurance programs which are offered within this State.

A subsequent meeting of the Hospital Relations Committee was held in conjunction with the Council and Legislative Committees of the Society at a hearing granted representatives of the Arkansas Hospital Association for discussion of provisions of the Medical Practice Act. At that time the various reasons for introducing the provision on corporate Medical Practice were discussed and explained to the members of the Hospital Association.

It is the recommendation of the Hospital Relations Committee that for reasons which were proposed in our previous annual report, coverage for radiological, laboratory, anesthesiological and physiatric service be included in Blue Shield and other voluntary medical service policies and not be retained principally as services offered under hospital coverage type insurance.

MEDICAL EDUCATION COMMITTEE

JAMES M. KOLB, Chairman

The Committee on Medical Education has consisted of the following members this past year: Doctors Willis E. Brown, Little Rock; R. C. Dickinson, Horatio; Henry G. Hollenberg, Little Rock; Louis K. Hundley, Pine Bluff; James M. Kolb, Clarksville; C. C. Long, Ozark and Henry W. Thomas, Dermott.

The Committee met at the University of Arkansas School of Medicine, Little Rock, on May 4, 1950, and outlined its work for the year. On the same date it met with the Liaison Committee of the Pulaski County Medical Society, composed of Doctors Hoyt Allen, Ben Wells, Daniel H. Autry and S. T. W. Cull. Meeting with the above were: Dr. Charles R. Henry, President-Elect, Arkansas Medical Society; Dr. W. C. Langston, Acting Dean, University of Arkansas School of Medicine; Dr. Henry C. Chennault, Retired Vice-President, University of Arkansas School of Medicine; and Mr. K. W. Newman, Director of the Hospital Admissions and Clinic of the University of Arkansas School of Medicine. A lengthy discussion was held concerning the operation of the medical school, the hospital and the proposed new medical center. No conclusions were agreed upon, but many misunderstandings were brought to light. Henry Hollenberg was asked to contact Dr. Lewis Webster Jones, President of the University of Arkansas, Governor Sid McMath and Mr. Jack Stevens, member of the Board of Trustees, University of Arkansas, and to report to the Committee as soon as possible.

The Committee met at Little Rock on June 11, 1950, to receive Doctor Hollenberg's report of his conversations with Dr. Lewis Webster Jones, Governor Sid McMath and Mr. Jack Stevens. After much discussion it was felt that a written statement should be secured from Doctor Jones and Governor McMath. A proposed "Statement of Policy" was drawn up and presented to the Council of the Arkansas Medical Society for approval. After their approval was secured, it was forwarded to Doctor Jones. The Trustees of the University of Arkansas adopted it, and it was published in the Journal of the Arkansas Medical Society, September, 1950, Page 76.

Several meetings of the Committee were held in conjunction with the Council of the Arkansas Medical Society during the fall. They concerned the proposed Medical Center. The Committee recommended to the Council that it reaffirm its approval of the proposed Medical Center. This, the Council did.

The Committee met January 28, 1951, at Little Rock, together with the Committee on Postgraduate Study. Also present were: Drs. Earle H. Hunt, President, Arkansas Medical Society; Charles R. Henry, President-Elect, Arkansas Medical Society; and H. C. Nicholson, Dean, University of Arkansas School of Medicine. This joint

meeting was called, at the suggestion of Doctor Hunt, to consider a proposed program of Doctor Nicholson regarding the establishment of a General Practice Residency at the University Hospital. After much discussion the adoption of such a program was recommended. It is, as follows:

GENERAL PRACTICE RESIDENCY PROGRAM

Operation

First Year of General Practice Residency (Internship)

- I. This would be essentially the same as the present rotating internship. Physicians entering upon this course would not be required to commit themselves to a career in general practice but in selecting them those who have a definite tendency toward this area of medical work would be favored.
- II. Arrangements would be made for a series of seminars and clinical conferences at no less than weekly intervals. These would be conducted as far as possible by qualified general practitioners or by men of long experience in the private practice of medicine. It would be very important to have the subject matter of these conferences suggested by general practitioners, especially those of recent graduation who realize the defects in their own training. These seminars should be conducted exclusively for the benefit of the house staff group. The temptation to bring undergraduate teaching and specialty motives into this program should be resisted. (It appears that one of the outstanding defects of the present intern training program is the failure to have conferences conducted for the exclusive benefit of the interns. Although it is true that a large number of good teaching conferences are available to these men, the idea of having a session devoted to their exclusive benefit would have had an important effect upon the group morale.)

Second Year of General Practice Residency

- I. To establish office and examining rooms for 6-12 men. These men would see new patients as they come into admitting office at rate of about four new patients per day. These patients would come from Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and Psychiatry. Two physicians would share office and examining room facilities so that one physician would have office hours in the morning and the other in the afternoon. When the resident physician was out of the office he would make hospital rounds, take special problem cases to other clinics for consultation, work one-half day a week in the Emergency Room, attend clinics and seminars, etc.
- II. Patients that needed hospitalization would be admitted through the regular channels and be handled by him under supervision in the house—the general practitioner serving as assistant or surgeon in surgical cases, as accoucheur in obstetric cases, etc.
- III. Return visits (Emergency Room, Clinic, or Hospital) would be scheduled with the same general practice resident physician.

Location

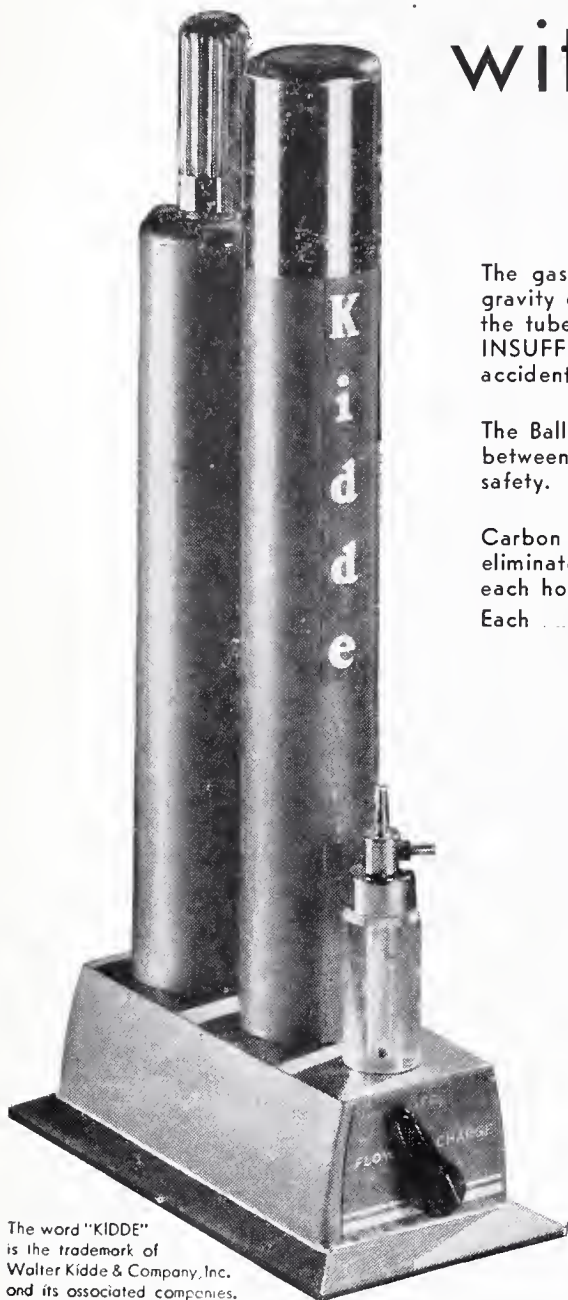
Several areas could be made available for this activity. A separate building could be developed in the parking area or one of the store rooms could be equipped. Better still is the area of storage in the housekeeping area.

Establishment of small waiting room and clerk's desk with two small offices and an examining room between would serve each two men (6 men, 3 examining rooms, etc.).

Supervision

The supervision of these clinics should be by general

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The Ball-Type Flow Meter shows at all times the rate of gas flow to the patient. A comfortable rate between 0 and 90 cc-min. can be selected and maintained or altered at any time with complete safety.

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Carbon Dioxide Gas is used in the KIDDE TUBAL INSUFFLATOR because it is rapidly absorbed and eliminates the danger of air embolism. The Carbon Dioxide is supplied in small, disposable cylinders, each holding enough CO_2 for several tests.

Each

\$120.

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With the objective of reducing the hazards incident to uterotubal insufflation for patency determination, the Kidde Manufacturing Company has engineered a new, simple, tubal insufflator offering the following advantages:

Carbon dioxide is utilized as the insufflating gas because it is rapidly absorbed and eliminated through the lungs. Gas is furnished by a small Kidde cartridge of carbon dioxide similar to that used in soda water siphons.

The gas is supplied automatically at a constant pressure within tolerable limits, eliminating possibility of introducing a dangerous pressure into the uterine cavity. Control is not dependent upon functions of valves, but on the force of gravity on a weighted piston. The machine will not deliver more than 200 mm. Hg. pressure without deliberate manipulation by the operator.

The insufflator is controlled and operated with a single on-and-off valve, which admits a fixed volume of gas (100 cc.) at a fixed pressure (200 mm. Hg.). There is no needle valve requiring constant manipulation during the test.

the test to regulate pressure. With the Kidde Tubal insufflator the physician is free to devote his entire attention to the patient without fear of accident. The machine cannot deliver a dangerous pressure.

It provides for diagnostic or therapeutic use of either carbon dioxide or opaque oil. A permanent written record of each patency test is provided.

THE GASOMETER

Safety is achieved in the Kidde Tubal Insufflator by the use of a Gasometer, a new and exclusive feature. The Gasometer consists of a cylinder having a capacity of 100 cc. and a lead-weighted piston. The piston provides the pressure head which delivers the carbon dioxide to the cannula, and the weight of piston is so calibrated that it cannot produce a pressure higher than 200 mm. Hg. In operation, the gas used to perform a test is delivered by the Gasometer. It is not drawn directly from the CO_2 cartridge or the expansion chamber which may have a pressure of several hundred of pounds per square inch. Inasmuch as the Gasometer cannot deliver gas at a pressure higher than 200 mm. Hg. there is no possibility of building up dangerous pressures in the patient's body when the Kidde Tubal Insufflator is used.

Kymograph Model.....

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practitioners in practice known as associates of assistant professors in general practice. They would be selected for their high caliber of practice and interest in this program, administrative supervision to be under the Director of Postgraduate Medicine.

The general practice resident should be given an opportunity to learn:

- A. Radiographic techniques and interpretations within the limits of general practice.
- B. The equipment and operation of a small office and laboratory as can be used to advantage in general practice.
- C. Economic and ethical principles involved in general practice.
- D. The use of state institutions and welfare agencies for the benefit of his patients, such as the State Tuberculosis Sanatorium, Visiting Nurses Program, and State Rehabilitation Program, Venereal Disease Program, the State Hygienic Laboratory facilities, etc.
- E. A considerable number of projects can be listed under this general category. The ones given here will serve as examples.

The Chairman wishes to express his appreciation to the members of his Committee for their aid, advice and co-operation, and especially to Dr. Henry Hollenberg for his liaison work with Dr. Lewis Webster Jones, Governor Sid McMath and the Trustees of the University of Arkansas.

In amending his printed Report, Chairman Kolb stated that his Medical Education Committee had presented the following recommendations:

1. That the Council of the Arkansas Medical Society write a letter of appreciation to the University of Arkansas Board of Trustees for the statement of policy as published in the September, 1950, issue of The Journal of the Arkansas Medical Society and for their endorsement and work during the recent state legislature for the securement of the Medical Center.

2. That the Council of the Arkansas Medical Society issue a statement of policy for Journal publication regarding Society members' abuse and mis-use of the pathological department of the University of Arkansas School of Medicine.

3. That the proposed General Practice Residency at the University of Arkansas School of Medicine be officially approved and that the recommendation be made to faculty members that said residency be started July 1, 1951.

HEART COMMITTEE

C. T. CHAMBERLAIN, Chairman

The Heart Committee has carried out no specific scientific program this year since its activities have been devoted largely to organization of the Arkansas Heart Association, Inc., and to participation in and execution of the two annual campaigns in February, 1950 and February, 1951, respectively.

PROCUREMENT AND ASSIGNMENT COMMITTEE

FOUNT RICHARDSON, Chairman

Your P & A Committee is now known officially as the State Advisory Committee to Selective Service. We are now receiving notices from the services as to the status of men who are being considered for call to service or who are being classified for draft, prior to the actual call.

Our directives advise us to consider only the essentiality

of a man according to the need of his services at home. This is moderated by several factors . . . the number of physicians in the city, the number in surrounding towns and the availability of hospitals by good roads.

Your Committee has given serious consideration to every case brought to their attention. It is also cognizant of the needs of our Armed Services.

For the future . . . and no one can be sure of it, we have been told that within the next three or four years every eligible physician, both in the reserve and in the draft will be called to duty, and that duty will probably be from 22-30 months.

At present only a few calls for doctors are out. It would seem that the number is unusually small. We are advised, however, that drafting and calling to duty will probably be much higher by August '51.

GRIEVANCE COMMITTEE

H. T. SMITH, Secretary

This is a report of your Grievance Committee. Up to the present time only two complaints have been filed with this committee. Both have been thoroughly investigated and there was not sufficient evidence to prove that either of the doctors, against whom these complaints were filed, were guilty of unethical conduct.

COMMITTEE ON THE REVISION OF THE CONSTITUTION AND BY-LAWS

J. J. MONFORT, Chairman

The Committee on the Revision of the Constitution and By-Laws, meeting at Fort Smith, Arkansas, on Thursday, March 29th, made the following recommendations in regard to the Constitution and By-Laws of the Arkansas Medical Society:

1. That Article V of the Constitution be amended to read as follows:

"The House of Delegates shall be the legislative body of the Society, and shall consist of: (1) Delegates elected by the component county societies; (2) The Councilors; and (3) ex-officio, the President, President-Elect, Speaker and Vice-Speaker, Secretary and Past-Presidents of the Society, provided, however, that the ex-officio members shall have the power of voting on all subjects except the election of officers."

2. That Article IX (Sections 1 and 2) of the Constitution be amended to read as follows:

"Section 1. The Officers of this Society shall be a President, President-Elect, three Vice-Presidents, Speaker, Vice-Speaker, a Secretary, a Treasurer, ten Councilors and an Executive Secretary."

"Section 2. The President-Elect and Vice-Presidents, the Speaker and Vice-Speaker, the Secretary and the Treasurer shall be elected annually, each to serve a one-year term. On the expiration of his term as President-Elect, that person shall automatically succeed to the Presidency and shall serve as President for the ensuing year. Each year, five Councilors shall be elected, each to serve a two-year term. All officers shall serve until their successors are installed."

3. That Article X be deleted in its entirety.

4. That Chapter VI (Sections 1, 4 and 5) of the By-Laws be amended to read as follows:

"Section 1. The President shall preside at all meetings of the Society and shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable,

shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful."

"Section 4. The Treasurer shall give bond in the sum as directed by the Council. He shall demand and receive all funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands."

"Section 5. The Secretary, in case of vacancy in the office of Executive Secretary, shall assume the duties of that office pending the filling of the vacancy, and shall perform such other duties as are imposed by the Constitution and By-Laws. He shall be the scientific and professional adviser of the Executive Secretary, and shall assist the Executive Secretary concerning all matters without the jurisdiction of one not holding the degree Doctor of Medicine. The Secretary, as defined by the Constitution, shall be known as the Constitutional Secretary and shall give bond in the sum as directed by the Council. The amount of his salary shall be fixed by the Council."

5. That Chapter VI of the By-Laws include Sections 7, 8 and 9 as follows:

"Section 7. The Speaker shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require."

"Section 8. The Vice-Speaker shall officiate for the Speaker in the latter's absence or at his request. In case of death, resignation, or removal of the Speaker, the Vice-Speaker shall officiate during the unexpired term."

"Section 9. The Executive Secretary shall be the directing manager of the Society's Headquarters and Journal offices, and shall supervise the work of all salaried employees in the Society's offices. Such supervision shall be subject to directives from the House of Delegates, the Council, the Executive Committee, and the President of the Society. He shall discharge the administrative functions of the Society not within the duties of other officers or of committees to perform. He shall assist, at their request, all officers and committees, and shall keep himself informed in regard to non-professional matters affecting the medical profession, for the purpose of keeping himself qualified to perform the services herein mentioned. He shall be responsible for the execution and carrying out of the policies of the Society and in that connection shall perform all specific tasks committed to him by the Committees, the Council, and the Officers of this Society. The amount of his salary shall be fixed by the Council and he shall give bond in the sum as directed by the Council."

6. That Chapter VII (Sections 1, 2 and 4) of the By-Laws be amended to read as follows:

"Section 1. The Council shall meet on the first day of the Annual Session and daily during the session and at such other times as necessity may require, subject to the call of the chairman or on a petition of three Councilors. It shall meet on the last day of the Annual Session of the Society to organize and outline the work for the ensuing year. It shall elect a chairman. It shall, through its chairman, make an annual written report to the House of Delegates."

"Section 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for

improving and increasing the zeal of the county societies and their members. He shall be prepared to make an annual written report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed on a properly itemized statement; but this shall not be construed to include his expenses in attending the Annual Session of the Society."

"Section 4. The Council shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately."

7. That Chapter VIII (Section 1) of the By-Laws be amended to read as follows:

"Section 1. The standing committees of this Society shall be as follows:

1. A Committee on Scientific Work.
2. A Committee on Medical Legislation.
3. A Committee on Health and Public Instruction.
4. A Committee on Medical Education and Hospitals.
5. A Committee on Public Relations.
6. A Committee on Medical Economics.
7. A Committee on Scientific Exhibits.
8. A Committee on Arrangements.

Unless otherwise provided, these committees shall be appointed by the President. Each committee shall consist of at least three members. A greater number may be appointed whenever circumstances require a larger committee. The President and Secretary shall be ex-officio members of all committees."

8. That Chapter XI of the By-Laws be amended to read as follows:

"The House of Delegates may amend any chapter of these By-Laws by a two-thirds vote of the Delegates present at any Annual Session, provided that each amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in a bulletin or Journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken."

COMMITTEE ON REVISION OF COMMITTEES

ELLERY GAY, Chairman

The Committee on Revision of Committees of the Arkansas Medical Society met at the Albert Pike Hotel, Little Rock, on Sunday, April 8th, with the following in attendance: Chairman Ellery C. Gay, G. W. Reagan, W. R. Brooksher, Roy I. Millard and Charles R. Henry, President-Elect.

The experimental committee set-up, proposed in 1949, has now been in effect for two years. The Committee on Revision of Committees has studied the operation of this set-up and, by unanimous vote, makes the following recommendations:

1. That the major committees . . . i. e., Committees on Annual Session, Legal Medicine and Legislation, Medical Service, Public Relations and Medical Education & Hospitals . . . with their chairmen and advisors, be abolished.

2. That the Committee on Arrangements be appointed

by the county medical society, in accordance with the Constitution, having as its duty the arrangement of the physical facilities for the Annual Session of the Society.

3. That a new committee, to be known as the Committee on Annual Session, be appointed, duties of which shall be to arrange for scientific exhibits, scientific program and for memorial services.

4. That the following committees be abolished: Legal Affairs, Medical Service, Military Medicine, Extension of Medical Care, and Heart.

5. That the Committee on Mental Hygiene be abolished and a committee to be known as the Committee on Liaison with the State Hospital for Nervous Diseases be appointed, the duties of which shall be that of acting in liaison capacity with the State Hospital for Nervous Diseases and carrying out the duties now assumed by the Committee on Mental Hygiene.

6. That the Committee on Public Health be abolished and a Committee on Liaison with the Arkansas State Board of Health be continued, the duties of which shall be that of acting in a liaison capacity with the Arkansas State Board of Health and carrying out the Constitutionally-prescribed duties of the Committee on Public Health.

7. That the Committee on Tuberculosis shall be continued, but shall have the additional duties of acting in a liaison capacity to the Arkansas Tuberculosis Sanatorium and to the Arkansas Tuberculosis Association.

8. That, for matters in Civilian Defense, the committee now appointed by the State Civilian Defense Authority function for Civilian Defense in the Arkansas Medical Society.

REPORT OF THE STATE MEDICAL BOARD OF THE ARKANSAS MEDICAL SOCIETY

JOE VERSER, Secretary

The Secretary of the State Medical Board makes the following report of the activities of this Board since the last meeting of the Arkansas Medical Society.

The officers of the Board are as follows: C. Ray Williams, Vice-President, and Joe Verser, Secretary-Treasurer. Charles H. Lutterloh, President, resigned from the Board effective March 1, 1951.

The Secretary and the Board's Attorney, Mr. James Campbell, met in June with the Committee appointed by the Arkansas Medical Society to rewrite the Medical Practice Act. The Secretary later met with the Hospital Relations Committee and the Legislative Committee of the Arkansas Medical Society. The Committees working together wrote amendments to the Medical Practice Act and the Basic Science Act. The Board feels that it is unfortunate that these amendments failed to pass the Legislature and that greater effort should be made during the next legislative session to get these amendments enacted into law.

The Board investigated every case of violation of the Medical Practice Act reported to the Secretary during the year. One court conviction was obtained and two court cases are now pending.

The Secretary and one Board Member attended the Federation of State Medical Boards in Chicago. This Board still maintains reciprocal relations with 42 states.

Following is a report of Board proceedings—March 1, 1950—March 1, 1951.

Physicians registered for 1951:

Resident	1,350
Non-resident	360
Physicians licensed by examination	73
Physicians licensed by reciprocity	45
Physicians certified to other states	74
Revoked for non-payment of annual registration fee	55
Suspended for non-payment of annual registration fee	94
Physicians placed on probation for violation Federal Narcotics Act	2
Court convictions obtained for violation of Medical Practice Act	1
Cases pending for violation of Medical Practice Act	2

Following is a financial report covering the period March 1, 1950, through February 28, 1951. A yearly audit by a certified public accountant will be made June, 1951.

Cash on hand—March 1, 1950.....	\$ 9,567.79
Bonds—Series E, purchase price.....	6,000.00
Collections from the following:	10,561.25

Registration fees	\$ 4,281.25
Reciprocity fees	2,700.00
Certification fees	1,075.00
Primary examination fees	1,440.00
Final examination fees	1,050.00
Duplicate certificates	15.00

TOTAL.....	\$10,561.25	\$26,129.04
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Expenditures:

Salary—Secretary & Exp. of Board members	\$5,630.17
Attorney fee and travel exp. to meetings	698.00
Arkansas Basic Science Board....	2,000.00
Office rent	180.00
Dues of Federation of State Board of U. S.	25.00
Office expense—Printing, Telephone, postage, frt. stationery, bond, etc.	959.18
Refunds	83.00
Equipment	147.00
C.P.A. Audit	100.00

\$9,822.35

Total expenditures	\$ 9,822.35
Bonds on hand	6,000.00
Cash balance in bank	10,306.69

\$26,129.04

REPORT OF ARKANSAS STATE CANCER COMMISSION

CARL A. ROSENBAUM, Secretary

Progress in all phases of the Arkansas State Cancer Commission program may be reported for this agency's sixth year, which concludes June 30, 1951.

American College of Surgeons Approval for Tumor Clinics

In May, 1950, a representative of the American College of Surgeons inspected the seven Tumor Clinics, designated by the State Cancer Commission, and cancer facilities in the various hospitals. In August and September, the Department of Clinical Research of the American College of Surgeons recommended approval of each of the seven Tumor Clinics.

When the Cancer Commission began its program with full-time personnel in January, 1947, the Tumor Clinic at University Hospital, Little Rock, was the only approved facility of its kind in Arkansas. Through the efforts of the Cancer Commission, five Tumor Clinics were organized formally in 1948 according to the Minimum Standards set up by the American College of Surgeons. These five are: Southeast Arkansas Tumor Clinic, Pine Bluff; Sebastian County Tumor Clinic, Fort Smith; Northeast Arkansas Tumor Clinic, Jonesboro; South Arkansas Tumor Clinic, El Dorado; and St. Vincent Tumor Clinic, Little Rock. The Bowie-Miller Counties Medical Society Tumor Clinic, Texarkana, established in 1947, received American College of Surgeons approval in 1948.

Bringing recognition to Arkansas' Cancer Control program in a short time, American College of Surgeons approval is based on the clinic organization with required specialties represented and a specified time for regular meetings, maintenance of tumor records on all patients seen at the clinic, systematic and accurate follow-up procedure on all patients, adequate facilities for diagnosis and treatment, statistical and evaluation studies of the clinic load, and care of the cancer patient.

Strategically located Tumor Clinics are the means of bringing adequate cancer services and facilities within the reach of a larger segment of the population, particularly the indigent.

Policy to Determine Indigence of Cancer Patients

Approval has been given by the State Cancer Commission to the following policy with reference to determining the indigence of a cancer patient. The Tumor Clinic Director or the physician at the Tumor Clinic, who treats the patient, will determine the indigence of a cancer patient, instead of the doctor, who makes the original referral to the State Cancer Commission office by execution of a Referral Form for this purpose.

The Association of Tumor Clinic Staff Members in Arkansas, composed of staff members of the seven Tumor Clinics, has concurred in this policy. This organization has pointed out that the medical profession and lay public should be informed that no doctor receives remuneration from Cancer Commission funds for work in the Tumor Clinics or for treatment of Cancer Commission patients.

Since the diagnosis and treatment of patients, including X-ray therapy, is dependent upon the charitableness and cooperation of the Tumor Clinic staff members, the State Cancer Commission's policy is justified.

Hospitalization and Related Services

State funds made available to the State Cancer Commission in an appropriation of \$50,000.00 are utilized to provide per diem hospitalization, when patients qualify for the Cancer Commission program. If a patient is able to pay a fee or part fee to a doctor, this patient is not eligible for hospitalization by the State Cancer Commission. Treatment and care for terminal cases cannot be provided.

Effective March 1, the approved per diem for hospitalization was raised to \$8.00 from \$6.00, this to include all routine care for proper hospitalization. There are no funds available for the payment of surgery, X-ray or radiation therapy. A schedule of fees has been approved for payment to private radiologists for diagnostic X-ray procedures, as a part reimbursement for material.

Domiciliary care and, in cases of emergency, transportation, have been provided by funds of the Arkansas Division, American Cancer Society, administered by the Cancer Commission.

Central Cancer Registry

At the beginning of this year, 1951, the total active cancer case load for all Tumor Clinics in Arkansas totaled 2,991, according to tabulations from the Commission's Central Cancer Registry. Of these cases, 1,769, or 59% were registered at University Hospital Tumor Clinic. The Texarkana Tumor Clinic with 343 cases, is the second largest in the state. Other Tumor Clinic cancer cases are: St. Vincent, 295; Pine Bluff, 211; Jonesboro, 167; Fort Smith, 129, and El Dorado, 77.

All statistical information obtainable from the Central Cancer Registry is dependent upon tumor records and follow-up of patients from the various Tumor Clinics. Lack of reporting such information is handicapping our statistical work, and as we know, this can only be remedied at the source by the doctors themselves, who are responsible for such records. Completeness in reporting and promptness in reporting can be accomplished by the Tumor Clinic Secretary to the Central Cancer Registry only when the Tumor Clinic staff members make this possible.

Information in the Central Cancer Registry serves a dual purpose: first, as an administrative tool in a program of service to the cancer patient; and second, a source of morbidity data.

The Central Cancer Registry serves a significant need in the professional education field. Statistical data pertaining to primary site, method of diagnosis, therapy, and end results is prepared and furnished for surveys, scientific discussions and publications by doctors affiliated with the University of Arkansas, School of Medicine, and the Tumor Clinics. Statistical research was done for several papers pertaining to cancer, which will be presented during this session of the State Society.

In order that statistics may be gathered with accuracy and speed when needed, Tumor Records in the Central Cancer Registry are being coded; then tabulation will be by machine.

Professional Education

Three hundred and eleven doctors participated in the Cancer Control program by referral, diagnosis and/or treatment of a cancer patient during the past fiscal year, and 151 of these doctors participated for the first time. This service is given on a voluntary basis.

Two radiologists and one surgeon completed refresher courses authorized by the State Cancer Commission.

"The Cancer Bulletin," a medical publication designed to stimulate cancer case-finding, is sent bi-monthly to 1,250 doctors in Arkansas, and 350 dentists receive a limited dental issue.

Fourteen out-of-state specialists in the fields of surgery, X-ray, and radium therapy and research came to Arkansas to speak on cancer and phases of its treatment under the auspices of the State Cancer Commission. They participated in four clinical area seminars, were speakers at the Arkansas State Medical Society and at the Tumor Clinics.

The Association of Tumor Clinic Staff Members, organized in March, 1949, meets three times annually for scientific sessions. At the last Association session, Dr. Fred Hames, Director of the Southeast Tumor Clinic, Pine Bluff, was elected Association Chairman, succeeding Dr. D. W. Goldstein, Director of the Sebastian County Tumor Clinic. National recognition has been taken of this Association, which has been termed a "unique organization" in the professional field. The State Cancer Commission has been asked to furnish a written exposition of the organization.

and its functioning for the benefit of other state cancer control programs.

There is a good response from Medical Societies and other professional groups, requesting professional cancer films, especially the series on "The Problem of Early Diagnosis" and "Breast Self-Examination."

Members of the Committee on Cancer Control, Arkansas Medical Society, whose chairman is a member of the Cancer Commission, assist in the sponsorship of professional education activities.

Growth of Program

From 65 patients in 1945-1946, to almost 3,000 patients in 1951, is a rapid growth. The contribution and participation of the doctors of Arkansas have made possible this state's outstanding cancer control program.

The recent General Assembly of Arkansas set up a biennial appropriation of \$50,000.00, the same amount as appropriated the preceding two years, for the program of the State Cancer Commission. It is anticipated the federal grant-in-aid funds, allocated to Arkansas for cancer control, will be substantially reduced this year. As our program expands and grows, our funds available become smaller. More careful administration and screening must necessarily be employed in the expenditure of our monies.

Annual Report Published

Our most ambitious publication thus far is the Annual Report of the Arkansas State Cancer Commission for the last fiscal year, July 1, 1949, through June 30, 1950, which has received numerous commendations at home and abroad. It was sent to all states, and acknowledged by praiseworthy letters expressing interest in Arkansas' Cancer Control program. This annual report has been sent to all doctors who have participated in the Cancer Commission program. Copies are available upon request.

Cancer Control—Conclusion

The Arkansas State Cancer Commission was created by Act 277 of the 1945 General Assembly as the official agency responsible for the **Cancer Control** program in Arkansas.

Cancer Control implies a reduction in mortality of the disease, and its prevention. With broad use of available knowledge of cancer and its skillful application, cancer can be controlled. Cancer control is dependent upon adequate medical personnel, trained in techniques of cancer diagnosis and treatment. Cancer control requires public education as to the nature and significance of cancer, and on this meeting ground the prospective patient shares with the physician the responsibility for discovering cancer in its earliest stage. Cancer control bridges the fields of preventive and curative medicine, drawing the two closer together to provide cancer services. Cancer control is integration and coordination, bringing current knowledge of the disease and available facilities to the ultimate point of application, the cancer patient.

REPORT OF DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

R. B. ROBINS, Delegate

I shall discuss briefly what I consider the two most significant happenings at the Cleveland session of the American Medical Association.

The Board of Trustees of the A.M.A., at this session took the lead by appropriating half a million dollars as the nucleus of a fund to be raised for the aid of medical

schools throughout the Nation. Pointing to the dangers of Federal interference, the Board of Trustees said:

"There is a growing public awareness that Federal subsidy has come to be a burden, not a bounty, for it is bringing intolerable increases in taxation, and is dangerously increasing Federal controls over our institutions and the lives of our people."

The Board expressed the hope that its action will stimulate other professions, industries, businesses, labor groups and private donors to help swell the fund for medical education, and it urged all American doctors to contribute individually and to take the lead in obtaining contributions from other sources. This is a challenge to each and every one of us to make a contribution to this fund for medical education. It is hoped that each state and each county medical society will appoint committees to sponsor this movement.

The second significant happening at Cleveland was the address of Mr. William L. Hutcheson, General President of the United Brotherhood of Carpenters and Joiners of America in which he announced that his Union's Twenty-sixth General Convention had voted down a resolution to support the Truman National Health Program.

Mr. Hutcheson, who also is a Vice-President of the American Federation of Labor, denounced socialized medicine and the entire socialistic philosophy of compulsion. He analyzed both of them as a serious threat to the rights and freedoms of labor and all other groups in America. And he said that he was happy to take a stand beside us in our fight for our convictions.

This courageous action by Mr. Hutcheson and the Carpenters' Union, which has 700,000 members, now calls for a vigorous follow-up. It should be regarded as the opening gun . . . the precedent . . . the example . . . for a barrage of similar actions by labor leaders and unions all over the country. We must take the Hutcheson message to every state, district and local labor leader and labor organization in America. No other single activity will do more to hasten the final tolling of the bell for Ewingism.

REPORT OF THE COUNCIL

JOHN H. WILSON, Chairman

The action taken and recommendations made by the Council of the Arkansas Medical Society during the year 1950-51 are herewith outlined and submitted to the House of Delegates:

The Council Executive Committee in conference telephone call on May 1, 1950:

(1) Authorized the sum of \$500 to be spent in behalf of R. B. Robins of Camden with reference to his nomination for Vice-Presidency of the American Medical Association at the AMA Annual Session, San Francisco, during June, 1950.

(2) Appointed a special committee of five to draw up a new Medical Practice Act for presentation to the 1951 Arkansas Legislature, the committee consisting of Joe Verser, Chairman; Ellery C. Gay, W. J. Butt, George C. Burton and A. S. J. Clarke.

The Council met on June 11, 1950, and took the following action:

(1) Appointed a Council liaison committee to confer with the Basic Science Board and the State Medical Board, the committee consisting of Louis K. Hundley, Chairman; John W. Smith and Dan Autry.

(2) Expressed disapproval of action taken by the Ar-

Arkansas Optometry Board against certain Little Rock Ophthalmologists and expressed confidence in the professional and personal integrity of the physicians involved.

(3) Authorized payment of \$35 annual membership dues in the Arkansas Health Council.

(4) Appointed a special Council committee to meet with executive officers of the Arkansas Pharmaceutical Association in effort to settle existing differences between the two Societies . . . the committee consisting of Charles Henry, Chairman; John W. Smith and Dan Autry.

(5) Authorized the sum of \$500 for annual expense of the Committee for the Extension of Medical Care of the Arkansas Medical Society.

(6) Approved the moving of the executive secretary's headquarters office from a one-room quarters to a two-room suite in the Professional Building, Fort Smith, at \$70 per month rent, and authorized purchase by the executive secretary of necessary additional office equipment.

The Council met on July 30, 1950, and took the following action:

(1) Adopted a resolution pertaining to the existing national emergency and requesting that those physicians first be called to the armed forces who had obtained their medical education at government expense and who had not served in the armed forces during World War II and ordered the resolution telegraphed to the Secretary of Defense; the Secretaries of the Army, Navy and Air Force; Arkansas members of Congress and to the American Medical Association.

(2) Ordered the sending of communications by the Military Medical Committee to former V-12's and ASTP's in the Society, urging them to volunteer for immediate service in the armed forces and emphasizing their moral obligation to the government.

The Council met on August 13, 1950, and took the following action:

(1) Appointed a special Society Procurement & Assignment Committee composed of one member from each Councilor District, two members-at-large and an executive committee of three and agreed to meet initially with the Committee on August 20, 1950, to discuss local aspects in the call-up of physicians to the armed forces.

The Council met on October 15, 1950, and took the following action:

(1) Authorized travel expenses for Chairman Thomas of the Committee for the Extension of Medical Care to attend the AMA Regional Conference on Legislation at Dallas, Texas, October 24, 1950, and allowed the Secretary to designate other Society representatives at a later date to attend the Conference.

(2) Appointed Chairman Briggs of the Child Welfare Committee as official Society representative to attend the Mid-Century Conference on Children and Youth, Washington, D. C., December 3-7, 1950.

(3) Approved petition for charter of Baxter County Medical Society.

(4) Authorized waiving of membership dues for members having entered the armed forces.

(5) Approved payment of necessary travel expenses to Society Procurement & Assignment Committee members on their submission of necessary expense estimates.

(6) Reaffirmed its disapproval of Society participation for the so-called "General Practitioner of the Year" award of the American Medical Association.

(7) Approved plan to establish a Red Cross Regional Blood Bank at Little Rock and recommended program participation by all county medical societies.

(8) Authorized travel expense for executive secretary's attendance at the AMA Interim Session and Public Relations Conference at Cleveland, Ohio, during December, 1950.

The Council, by mail vote, on December 26, 1950:

(1) Authorized travel expenses for Secretary Brooksher's attendance at the national meeting of the Committee on Social Security of the United States Chamber of Commerce, Washington, D. C., during February, 1951.

The Council met on January 7, 1951, and took the following action:

(1) Approved, with minor revisions, the new Medical Practice Act as drawn-up by the special committee to underlie same and as interpreted by Mr. Eugene Warren, legal advisor.

(2) Reaffirmed its approval of immediate construction of a 400-bed teaching hospital with reference to the proposed Medical Center and so advised Governor Sid McMath.

(3) Approved Secretary's action in presenting \$100 Christmas bonuses to the executive secretary and his secretarial assistant.

(4) Approved employment of Mr. Peter Deisch, legal advisor, during the 1951 State legislative session at the sum authorized by the Society in 1949.

(5) Allowed travel expenses for Chairman Reid of the Rural Health Committee and the Auxiliary President to attend the AMA Rural Health Conference at Memphis, February 23-24, 1951.

(6) Ordered paid travel expenses to Procurement & Assignment Committee members in accordance with their travel estimates.

The Council met on January 28th and took the following action:

(1) Approved plan to establish residencies in General Practice at the Medical School as presented by the Medical Education Committee.

(2) Approved exclusion from the proposed Basic Science Bill of optometrists and chiropodists.

(3) Condemned, by resolution, the practice of the Veterans Administration Hospital at Little Rock of accepting payments from Blue Cross-Blue Shield and other commercial insurance carriers on veteran patients holding such contracts and so notified the Veterans Administration Washington Headquarters, Arkansas members of Congress and the American Medical Association.

The Council met at the Hotel Marion, Little Rock, on the night of Sunday, April 22, 1951, and the following action was taken:

1. Approved Life Membership status for C. E. Benefield, Fort Smith; Edward F. Brewer, Augusta; J. R. Sloan, Garner and S. W. Douglas, Eudora, and recommended their acceptance by the House of Delegates.
2. Approved Affiliate Membership status for Jesse E. Little, Fort Smith; Q. R. Galloway, Alma; S. A. Southall, Lonoke; J. F. Brewer, Lonoke; Gibbs Biscoe, Dumas, and T. E. Burgess, Theo Freedman, Agnes Kolb, J. R. Wayne and Arranda A. Hughes, all of Little Rock . . . in each case, recommending their acceptance by the House of Delegates.
3. Recommended that county medical society officers submit applications for affiliate members for an ensu-

ing year during the month of December prior to that year for Council approval the following January.

4. Authorized payment of \$150 to Pulaski County Auxiliary to defray expense of the Auxiliary 26th Annual Meeting.
5. Approved the appearance of Mr. Bill Davenport, Student Council member of the Student American Medical Association, at the April 23rd Council meeting and at the initial meeting of the House of Delegates on April 23rd.
6. Authorized payment of \$360 to Auxiliary Ilse F. Oates Student Loan Fund as memorial for 36 deceased members since 74th Annual Session.
7. Authorized for a two-year period expenses to the national Auxiliary AMA meetings for Mrs. Mason G. Lawson of Little Rock.
8. Authorized \$500 for the expense involved in the all-state Rural Health Conference to be at Little Rock, August 8th & 9th.
9. Approved administration of Presidential Oath by Dr. Charles R. Henry as administered by Chief Justice Griffin Smith of the Arkansas Supreme Court.
10. Appointed special Budget Committee, composed of W. R. Brooksher, Dan Autry and J. J. Monfort, to draw up a proposed Society budget for presentation to the Council.
11. Received and accepted resignation of Mr. Sid Wrightsman, Jr., Society Executive Secretary, to become effective on July 1, 1951, and authorized payment of a full month's additional salary as gesture of gratitude by the Arkansas Medical Society.
12. Appointed a committee of three (Hundley, chairman; McDaniel & Dickinson) to draw up resolution honoring Dr. Fred Harris of Little Rock.

REPORT OF THE TREASURER

DANIEL H. AUTRY, Treasurer

Balance, April 1, 1950:

Treasury Bonds	\$11,400.00	
Loan to Arkansas Medical & Hospital Service, Inc.	10,000.00	
Bank Account	9,440.26	\$30,840.26

Cash Receipts:

Transfer from Secretary	\$23,000.00	
Refund from AMA	210.00	
Interest on Treasury Bonds.....	290.34	23,500.34

\$54,340.60

Cash Disbursements 37,914.55

\$16,426.05

Balance, March 31, 1951:

United States Treasury Bonds....	\$11,400.00	
Bank Account	5,026.05	\$16,426.05

In Hands of Secretary for transfer to Treasurer:

State Dues	\$16,400.81	
Journal (advertising)	3,877.19	
Special Accounts:		
Petty Cash Fund..	\$135.83	
Exhibit Booth		
Fund	922.61	
AMA Assm't Fund	50.00	1,108.44
		\$21,386.44

TOTAL ASSETS, MARCH 31, 1951.....\$37,812.49

REPORT OF THE EXECUTIVE SECRETARY

Mr. SID WRIGHTSMAN, JR.

Your executive secretary is pleased to report that, during 1950, Society members, as well as State medical societies elsewhere, appeared more aware of the existence of the headquarters office at Fort Smith and unhesitatingly used its facilities in all aspects.

As 1950 was the initial year of compulsory membership dues in the American Medical Association, in addition to the annual assessment of this Society, a considerable collecting, bookkeeping and banking problem fell to this office. Frequent bulletins, encouraging such payment from delinquent members, were issued throughout the year. Of the 1,168 members in-good-standing of the Society at the year's end, approximately 925 remitted the AMA 1950 membership dues. On a percentage basis, the Arkansas Medical Society appeared thirtieth on the list of State Societies in collection of the national dues.

In June, the headquarters office was moved from its one-room quarters in 310 Professional Building to a two-room suite in 311-312 Professional Building at a nominal increase of rent. Such a move has proved advantageous because of the additional space allotted for the establishment of a complete file of issues of The Journal of the Arkansas Medical Society dating back to 1903 and the creation of a "work" room for mimeographing and other necessary procedures involved in all-membership mailings.

This office maintained even closer alliance with the American Medical Association headquarters and the firm of Whitaker & Baxter during 1950 in disseminating important legislative information to members, under the direction of the Committee for the Extension of Medical Care of the Arkansas Medical Society. Its position as a state focal point of distribution during the AMA advertising campaign in the fall was invaluable.

Your executive secretary represented the Society at the AMA Annual Session at San Francisco in June and the so-called Clinical Session at Cleveland in December. Furthermore, his many contacts thereat will doubtlessly prove helpful in time to come.

At the suggestion of the Society's auditing firm, a new double-entry bookkeeping system was inaugurated following the 1950 Annual Session and is being ably accomplished by Miss Jeanne Kerwin of Fort Smith, now in permanent employ at the Society headquarters office as assistant to the executive secretary. Her excellent grasp of Society activities and procedures and her industry in all her official duties have made her a valuable asset to the Arkansas Medical Society.

It is your executive secretary's recommendation that the Society give careful consideration to the establishment of an annual budget during succeeding years, the drawing-up of which might best be undertaken by a Council-appointed Budget Committee. Because of the ever-increasing expenditures necessitated in the progress and expansion of Society activities, particularly during these critical legislative years, such a budget would seem of utmost importance to the financial welfare of the Arkansas Medical Society in years to come.

For their continuous cooperation and innumerable courtesies extended him throughout the past year, the executive secretary expresses profound appreciation to officers and members of the Arkansas Medical Society.

Louis K. Hundley, on Council recommendation, read the following resolution pertaining to Fred Harris of Little Rock:

WHEREAS Dr. Fred Harris of Little Rock, following a visit to Great Britain and Europe in the summer of 1950, has greatly aided our fight against socialism by personally carrying a message to thousands of lay and professional people in Arkansas and Missouri concerning his observations of socialism in action in Great Britain, and

WHEREAS Dr. Harris accomplished this work by speaking before forty-two different groups in these states on his own initiative and at his own expense, and

WHEREAS Dr. Harris's simple and sincere presentation of the facts has gained untold numbers of friends for our cause

THEREFORE BE IT RESOLVED by the House of Delegates of the Arkansas Medical Society in convention assembled at Little Rock, April 23, 1951, do hereby commend and honor Dr. Fred Harris for his unselfish loyalty and devotion to ideals in carrying on our never-ending fight for freedom.

By motion (Richardson-Drennen) the resolution was unanimously adopted by the House of Delegates.

Discussion from the floor ensued regarding necessary action to be taken in regard to the amendments to the Constitution and By-Laws of the Arkansas Medical Society presented at the 74th Annual Session and by motion (Brooksher-Richardson) action was deferred until the Wednesday, April 25th, session of Delegates.

Secretary Brooksher outlined the changes occurring in Congressional Districts, under the Congressional Redistricting Act to become effective June 6, 1951. He explained that vacancies were occurring on the State Medical Board of the Arkansas Medical Society in the First, Fifth and Sixth Congressional Districts with the expiration of terms of Joe Verser, Harrisburg (First District), C. Ray Williams, Morrilton (Fifth District), effective after December 31, 1951; and with the resignation of Charles H. Lutterloh, Hot Springs (Sixth District) which became effective March 1, 1951.

With reference to the expiration, effective after December 31, 1951, of the term on the State Medical Board of L. J. Kosminsky, Texarkana (not eligible for reappointment), of the old Fourth District, Secretary Brooksher explained the circumstance whereby, under the Congressional Redistricting Act, G. D. Murphy, Jr., El Dorado (Seventh District), whose term on the Board did not expire until 1953, would now be serving in the new Fourth Congressional District.

By motion (Dixon-Owens) G. D. Murphy, Jr., will serve as Fourth District Board member, pend-

ing his term expiration in 1953, and no nomination will be made to fill the vacancy to be left by L. J. Kosminsky after December 31, 1951.

Secretary Brooksher then discussed the necessary nominations to the Arkansas State Board of Health to be made in the Third and Sixth Congressional Districts, both of which remain unaffected by the Congressional Redistricting Act. To expire, are the terms of J. G. Gladden, Harrison (Third District) and J. P. Price, Jr., Monticello (Sixth District) effective after December 31, 1951.

The House then proceeded to select the following Nominating Committee: First District, L. H. McDaniel; Second District, C. A. Taylor; Third District, Austin F. Barr; Fourth District, H. T. Smith; Fifth District, W. H. Handley; Sixth District, M. L. Norwood; Seventh District, E. R. Browning; Eighth District, E. J. Easley; Ninth District, J. W. Dorman and Tenth District, Roy I. Millard.

By general agreement Board nominations in necessary Congressional Districts would be made by Delegates and members therefrom at a specified time on Tuesday, April 24th, in Parlor "A" of the Hotel Marion, in order that Congressional District changes could be properly announced to the membership.

The House then adjourned.

THIRD GENERAL SESSION

Tuesday Morning, April 24th — 9:30 A. M.

The meeting was called to order by President Hunt and President-Elect Henry took the chair.

The following scientific program was presented:

"Obstetric Problems in Fetal and Neonatal Mortality"—Carl P. Huber, Indianapolis, Ind.

"Infant Feeding"—Ernest H. Watson, Ann Arbor, Mich.

"Erythroblastosis"—William F. Mengert, Dallas, Texas.

"RH Incompatibility from a Pediatric Standpoint"—William G. Klingberg, St. Louis, Mo.

MEMORIAL SESSION

April 24, 1951

The meeting was called to order by President Hunt at 11:30 A. M.

The invocation was given by Rev. Cotesworth Pinckney Lewis, Dean, Trinity Cathedral, Little Rock.

A musical selection, "The Lord's Prayer" (Ma-

lotte), was given by the A Capella Choir of the Little Rock High School, under the direction of Mrs. Mary Frances Thompson, choir director.

Mrs. Warren S. Riley, President, Woman's Auxiliary to the Arkansas Medical Society, read the following names of deceased Auxiliary members: Mrs. A. C. Shipp, Pulaski County; Mrs. T. J. Thomas, Pulaski County; Mrs. J. M. Sheppard, Union County and Mrs. John Russ, Columbia County.

President Hunt read the names of the following deceased Society members:

IN MEMORIAM

Charles F. Cole, Prattsville, April 21, 1950.
 H. H. Rightor, Helena, May 20, 1950.
 John S. Poe, Little Rock, May 22, 1950.
 Clarence N. Bogart, Forrest City, May 24, 1950.
 Earl F. Norton, Marvell, May 28, 1950.
 Tom Mabry, Vilonia, May 30, 1950.
 Foster Jarrell, Hot Springs, May 31, 1950.
 Bonny M. Stevenson, Camden, June 3, 1950.
 James M. Norton, Arkadelphia, June 16, 1950.
 Victor P. Diederich, Hot Springs, July 18, 1950.
 N. R. Hosey, Marvell, July 24, 1950.
 William A. Butt, Green Forest, August 7, 1950.
 William S. Kendall, Cave City, August 26, 1950.
 Charles K. Townsend, Arkadelphia, September 20, 1950.
 Melvin K. Bottorff, Lake Village, September 26, 1950.
 Joel Cameron Land, Walnut Ridge, October 3, 1950.
 Hollis H. Buckalew, Rogers, November 6, 1950.
 Richard S. Smith, Parkin, November 13, 1950.
 Wallace R. Richardson, Little Rock, November 15, 1950.
 Carl D. Hartwig, Lake City, November 20, 1950.
 George P. Bridges, Paragould, November 22, 1950.
 Charles E. Kitchens, DeQueen, November 29, 1950.
 Milton Lee Smith, Crossett, December 5, 1950.
 Robert P. Harris, Knoxville, Tennessee, December 23, 1950.
 John G. Watkins, Sr., Little Rock, December 27, 1950.
 J. S. Coffman, Lavaca, December 30, 1950.
 C. R. Gray, Newport, January 5, 1951.
 Charles C. Reed, Jr., Little Rock, January 5, 1951.
 B. C. Clark, Lake Village, January 13, 1951.
 Hugh Johnson, Fort Smith, January 14, 1951.
 Herbert Moulton, Fort Smith, January 23, 1951.
 Earl T. Williams, Greenbrier, January 29, 1951.
 Jasper T. Matthews, Heber Springs, February 4, 1951.
 A. K. Wayman, Little Rock, February 6, 1951.
 Charles Edward Wilson, Blytheville, February 23, 1951.
 William W. Verser, Harrisburg, March 17, 1951.

Charles D. Tibbels, Black Rock, gave the Memorial Address.

The ever-rolling wheels of time have again brought to us the hour for our annual Memorial Service. And we are grateful, indeed, that we can turn aside for a few moments, in this dizzy whirl of every-day life and circumstances, and devote a few minutes to the memory of our fallen comrades and colleagues.

In our regular National Memorial Services, and in other memorial services we rarely confine ourselves to the fallen of the past year, or the last war; but we like to go back and also honor those that served in the years gone by, and helped to carve this nation out of the wilderness.

When a year or two has passed, man is so prone to forget: Yea, all too soon we forget. "Lord God of Hosts, be with us yet, lest we forget, lest we forget." So, in this instance, we may act without precedent. We may do an unheard of thing in a memorial service, but we want to go way back to get our bearings. We want to give credit where credit is due. We want to find our title right to this physical world. The foundation upon which we build. Find some of our ancestry, and dedicate it all to our fallen comrades and colleagues.

We like to think of the members of the medical profession as individual torch bearers. We shall so think of them here. Men that lift their torches high, and help to dispel the gloom of ignorance and superstition in the ages in which they lived. We read that this earth was once a place of edenic beauty and purity. But sin came into the world, and death by sin. As a consequence, sickness, pain, misery and death like the ancient saber-toothed tiger have followed the trail of the human family from that day until this. We also read that our forbears were told that because of their sin—"cursed is the ground for thy sake—Thorns and thistles shall it bring forth unto thee—and in the sweat of thy face shall thou eat bread." God also said "be fruitful, multiply and replenish the earth and subdue it." God has no place in his economy for a lazy man. But we are to strive to subdue the earth (wilderness); to beautify it and make it a better place in which to live. Our only God-given title-right to this physical world is that we subdue it, that we do our bit to make it a better place to live, and that we do God's will.

And may I say that no branch or system of science has done more to relieve suffering, to dispel ignorance and to make this a better world physically, than has the medical profession. We are co-workers with God in the physical, like the church and the ministry are co-workers with Him in the spiritual. To illustrate the point: We will take the very finest surgeon with the best trained assistants in a well-equipped hospital. Bring in a man with a lacerated abdomen, the viscera pouring out. He is cleaned up, his wound sterilized, not a contamination left on the field. Fragments debrided, edges approximated. The wound is closed, dressed and the patient put to rest. Everything in the most scientific manner. But, unless some power intervened other than the surgeon and his crew, the wound would not heal; it would fall apart, and the man would die. Of ourselves we cannot make one new cell. We cannot make two cells grow together. There must be some other power. Oh, you say, that is nature. Sure it is nature; but what is nature? Nature is nothing more than the laws, rules, regulations, the *modus operandi*, if you please, with which God deals with the creation and with the physical world. Just like he deals with the Spiritual world with the Spirit and the Word. Listen, Science is truth; Nature is power; when we can co-ordinate the two, we get results. And nothing succeeds like success. WE ARE CO-WORKERS WITH HIM.

In the 11th Chapter of Hebrews, in Paul's great art gallery of faith, (I like to think Paul wrote the letter to the Hebrews, and I believe he did), Paul said, "By faith Abel offered unto God a more excellent sacrifice than Cain, by which he obtained witness that he was righteous, God testifying of his gifts, and by it, he being dead, yet speaketh."

The same statement might be made concerning every man and every woman in medicine in what ever age they lived, having sacrificed themselves on the altar of service. "Dum Tacet Clamat," adopted as a slogan by some of

our fraternities, might well be inscribed to the memory of every one of them who have so served. Ever since sickness and death have been the common enemy of mankind, men and women have devoted their lives, fought, bled and died in giving relief to the best of their ability.

Thousands of years before Hippocrates, men and women lived, worked and died in the aid of suffering humanity. In ignorance? Yes. Superstition? Yes. But many had, at least, a little light, a little truth. Many had a dim torch; but a torch, none the less. They lifted it up, dispelling a little darkness. This grew a little from century to century.

In Moses' time, two thousand years before Hippocrates, the midwives of Egypt, Shiphrah and Push for instance, reached fame with their service and their "stools." And they had to have an element of success, judging by the rapidity with which the Israelites multiplied. They, with the "Medicine men" of their day, with a little bit of truth and a lot of superstition, improved along the way until Hippocrates day. It had to be that way or Hippocrates never would have been. Hippocrates was not a new creation. He was born of parents the same as we. We read that he came out of a family of doctors, such as they were. They were the descendants of a long line of men and women who gave their all, lived, served and went down, unheralded and unsung. It gives us pleasure to say this word for them today. They being dead, yet speak.

Then came Hippocrates: He was a man far ahead of his time. His foundation was truth and honor. He builded upon the truth that he received from the fathers. He divined a way to exclude the superstition, or, at least, a great deal of it. A brilliant mind established a code of ethics that has been and still is sacred to us. He established a system of medicine that has ever been referred to as scientific. He lifted his torch high. It still shines. He being dead, yet speaketh.

After him came Galen, whose writings were used as text books for a thousand years. On down the line; too many, too numerous to mention, but Harvey with his physiology; Pare, with his surgery; John Hunter, also a great surgeon; Jenner, with his vaccines; Pasteur, with his bacteriology; Lister, with his antiseptics, and many more. These men all builded on the foundation of truth. They stood each man in his place; lifted high their torches in the greatest century of progress up to that time.

Paul said—after mentioning Abel, Enoch, Noah, Abraham, Isaac, Jacob and many others—"And what shall I say more? For the time would fail me to tell of Gideon, and of Barak, and of Sampson, and of Jephthae, of David also."

So, having mentioned many of our ancestors who also died in the faith what shall we say of our contemporaries who have fallen the past year?

Our Secretary has read a long list of them. Many were our personal friends, and all were personal friends and loved ones of some of us. None of them stood alone for want of friends and loved ones. Some were old, like Dr. Charles F. Cole of Prattsville, who died at 81. Some like Dr. John S. Poe of Little Rock, only 40. Just barely started. Our neighbor, Dr. Bob Gray of Newport; we have known him since we were boys. Then our own Dr. W. S. Kendall and Dr. J. C. Land of our own Lawrence County Medical Society. All these years they were faithful members; always present if possible; always bringing something worthwhile to the meeting.

And Dr. Wm. W. Verser, lovable soul, we have known him 25 years.

May we hesitate a moment to say this: We stated that Doctor Verser was a lovable soul. He was more than that. He was a loving soul. He loved his family, his friends, his colleagues and his patients. He was an especial friend of the young doctor. You younger doctors present may not fully understand this, but back in the earlier days we young doctors were inclined to be afraid of the older doctors, and sometimes not without cause. Some of them were inclined to be hard on us. In those days there were not so many hospitals and clinics, and in cases of serious sickness, bedside consultations were the usual things. When a young physician had a serious case he was likely to call in an older physician for consultation. Too many times the older physician was inclined to criticize. Not so, Dr. Verser. He was always very kind to the young physician. If the young man was right in his deductions, Dr. Verser was delighted to indorse him. If not, he would not criticize, but lead up to the correct diagnosis or treatment in such a way that the young man usually caught the idea, suggesting the change himself. If not, Dr. Verser would make his suggestions with all kindness. He would talk to him, we imagine, very much as he later talked to his own son, Dr. Joe Verser. We never knew a young doctor in that territory that did not love Doctor Verser.

So we say of all those whom we honor today. Worthy soldiers in the physical battle of relief and freedom. They builded on the foundation of truth and honor. Each man stood in his place. He served his people well. Each knew what it was to give of his strength and energy to help the little waif to enter the world, and have a chance to live. Each knew what it was to fight the midnight battle and help some poor mother stay the hand of the pale-winged messenger that had come for her precious babe. They each have seen the look of gratitude and joy in that mother's eye, as he told her that the worst was passed and the baby would live. Each realized that that gratitude rested as a benediction upon his head as he went his way over the hard pathway of a doctor's life.

They lifted their torches high and have helped us to do what we are doing. They have given their lives on the altar of sacrifice to the cause for which they lived. As they have fallen they have passed their torch on to us that we might lift it in their stead, and we should be better men because they have lived. They expect it of us.

We are reminded of a little poem that came out of World War I. "We Shall Not Sleep" by Lt. Col. John McCrae:

"In Flanders Fields the poppies blow,
Between the crosses, row on row,
That mark our place;
And in the sky, The larks,
The larks still bravely singing fly,
Scarce heard amidst the guns below.
We are the dead;
Short days ago we lived;
Felt dawn, saw sunset glow;
Loved and were loved;
And now we lie in Flanders Fields.
Take up our quarrel with the foe;
To you from falling hands we throw, the torch—
Be yours to hold it high;
If you break faith with us who die,
We shall not sleep,
Though poppies grow in Flanders Fields."

May we not then fight the better fight because they have lived? May we not carry on as they would expect of us?

We shall cherish their memory in our hearts while we stand with heads uncovered as they pass in memory's bold relief to their last resting place, "The bivouac of the dead."

And with our ears tuned to faith, may we not hear them receive that welcome plaudit, "Well done, thou good and faithful servant—Thou hast been faithful with the things committed unto thee—And, in as much as thou hast done it unto the least of these my creatures, Thou hast done it unto me."

May we thank God for them as we dedicate this little service to their memory.

A musical selection, "God of the Open Air" (Cain), was rendered by the A Capella Choir of the Little Rock High School, under the direction of Mrs. Mary Frances Thompson.

The Memorial Session was concluded with a benediction given by Rev. Cotesworth Pinckney Lewis.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Tuesday Morning, April 24th — 10:00 A. M.
Rendezvous Room, Hotel Marion

The meeting was called to order by Chairman Mahoney.

The scientific program proceeded in order:

Chairman's Address—Paul L. Mahoney, Little Rock.

"Chronic Infection of the Middle Ear"—Robert H. Atkinson, Hot Springs.

"Management of the Deaf and Hard of Hearing Pre-School Child"—Edmund P. Fowler, Jr., New York, N. Y.

A round-table luncheon followed.

Tuesday Afternoon, April 24th — 2:00 P. M.

The meeting was called to order by Chairman Mahoney.

The scientific program proceeded in order.

"Intra-Ocular Foreign Bodies"—Gardner Landers and George C. Burton, El Dorado.

"Newer Treatment of Ocular Syphilis"—Leslie C. Drews, St. Louis, Mo.

Officers elected for the period 1951-52 were:
Chairman—L. Gardner, Russellville.

Vice-Chairman—Gardner Landers, El Dorado.

Secretary-Treasurer—K. W. Cosgrove, Little Rock.

Delegate—Raymond Cook, Little Rock.

Alternate—J. F. Henry, Jr., Little Rock.

SECTION ON OBSTETRICS AND GYNECOLOGY

Tuesday Afternoon, April 24th — 2:00 P. M.
Coach Room, Hotel Marion

The meeting was called to order by Charles R. Henry.

The scientific program proceeded in order.

"Carcinoma of the Uterus"—John C. Weed, New Orleans, La.

"Obstetric Hemorrhage"—Carl P. Huber, Indianapolis, Ind.

"Geriatric Gynecology"—Willis E. Brown, Little Rock.

"Toxemia and Eclampsia"—William F. Mengert, Dallas, Texas.

"Functional Uterine Bleeding"—Phillip S. Schreier, Memphis, Tenn.

The meeting was concluded with a question-answer period.

SECTION ON PEDIATRICS

Tuesday Afternoon, April 24th — 2:00 P. M.
Colonial Room, Hotel Marion

The meeting was called to order by Willis E. Brown.

The scientific program followed in order.

"Immunization in Infancy and Childhood"—Ernest H. Watson, Ann Arbor, Mich.

"The Importance of Early Diagnosis in Contagious Disease Management"—Archibald L. Hoyne, Chicago, Ill.

"Unexplained Fever in Childhood"—Fred M. Taylor, Houston, Texas.

"Amnioprotein Therapy in Leukemia"—William G. Klingberg, St. Louis, Mo.

"ACTH and Cortisone in Pediatrics"—David Goldring, St. Louis, Mo.

The meeting was concluded with a question-answer period.

FOURTH GENERAL SESSION

Tuesday Afternoon, April 24th — 2:00 P. M.

The meeting was called to order by President Hunt and the scientific program proceeded in order:

"Stellate Ganglion Injection in Cerebral Vascular Diseases"—Robert Watson, Little Rock.

"Modern Diagnostic Routine for Cancer of the Lung"—J. K. Donaldson, Little Rock.

"Cancer of the Larynx"—Jack Brizzolara, Little Rock.

"Ophthalmology for the Family Doctor"—John Dodson, Hot Springs.

"Facts on Tuberculosis in Arkansas"—A. C. Curtis, Little Rock.

"Bursitis in the Shoulder"—A. M. Davison, Hot Springs.

Tuesday Evening, April 24th

The Pulaski County Medical Society was host at a social hour from 6:00 P. M. to 7:00 P. M. in the Coach, Colonial and El Toro Rooms of the Hotel Marion. The annual banquet and dance then followed in the Ball Room of the Hotel Marion.

FINAL GENERAL SESSION**Wednesday Morning, April 25th — 9:00 A. M.**

The meeting was called to order by President Hunt and the scientific program proceeded in order.

"Cancer of the Esophagus"—Thomas H. Burford, St. Louis, Mo.

"Report on Blue Cross-Blue Shield"—Ellery C. Gay, Little Rock.

"Fractures of the Humerus"—John M. Hundley, Little Rock.

"The Care of Premature Infants in Arkansas"—Frances Rothert and Myron M. Nichols, Little Rock.

"Studies in Infertility"—Paul H. Woods, Hot Springs.

FINAL SESSION, HOUSE OF DELEGATES**Wednesday Afternoon, April 25th — 2:00 P. M.**

The House of Delegates was called to order by President Hunt. The following delegates and members seated as delegates by action of the House (Motion, Hawkins-Reed) were present:

ARKANSAS—R. H. Whitehead, Sr.; ASHLEY—M. C. Crandall; BAXTER—B. N. Saltzman; BENTON—Lee A. Dean; BOONE—J. G. Gladden; BRADLEY—W. J. Hunt; CARROLL—J. F. John; CHICOT—H. W. Thomas; CLARK—J. W. Kennedy; CRAIGHEAD-POINSETT—A. C. Modalevsky, Joe Verser; CRAWFORD—O. J. Kirksey; CRITTENDEN—L. C. McVay; CROSS-ST. FRANCIS—A. F. Barr; DESHA—H. T. Smith; DREW—J. P. Price, Jr.; FAULKNER—C. A. Archer, Jr.; FRANKLIN—C. C. Long; GARLAND—L. E. Reed, E. R. Browning, J. L. Rosenzweig; GRANT—Miles Kelly; GREENE—J. M. Williams; HEMPSTEAD—J. W. Branch; HOT SPRING—M. C. Berry; HOWARD-PIKE—W. H. Toland; INDEPENDENCE—C. A. Taylor; JEFFERSON—Virgil Payne; JOHNSON—J. M. Kolb; LINCOLN—C. W. Dixon; LITTLE RIVER—J. G. Shelton, Jr.; LOGAN—I. H. Jewell; LONOKE—S. A. Southall; MILLER—H. E. Murry; NEVADA—A. S. Buchanan; PHILLIPS—W. B. Connolly; POLK—L. K. Williams; POPE-YELL—Roy I. Mil-

lard; PRAIRIE—W. H. Crockett; PULASKI—T. D. Brown, E. F. Gray, E. J. Easley, John Samuel, Robert Jones, John Watkins, Jr., Alfred Kahn, R. E. McLochlin, Joe Sanderlin, R. J. Calcote and Dale Alford; SEBASTIAN—A. S. Koenig, D. W. Goldstein; SEVIER—C. A. Archer, R. C. Dickinson; UNION—E. J. Munn, W. H. Handley, Jr.; WASHINGTON—J. W. Dorman; WHITE—M. C. Hawkins, Jr.

Other members of the House of Delegates present were:

President Hunt, President-Elect Henry, Councilors Autry, Monfort, Richardson, Drennen, John W. Smith, Dickinson, Hundley, McDaniel and Owens; Past-Presidents Will H. Mock, Joe Shuffield, H. Fay H. Jones, L. T. Evans, A. S. Buchanan, H. T. Smith, and S. J. Allbright and Secretary Brooksher.

H. T. Smith presented the report of the Nominating Committee:

President-Elect—R. C. Dickinson, Horatio; S. A. Drennen, Stuttgart.

First Vice-President—Frank Kumpuris, Little Rock.

Second Vice-President—John Wilson, Magnolia.

Third Vice-President—D. W. Goldstein, Fort Smith.

Secretary—W. R. Brooksher, Fort Smith.

Treasurer—Daniel Autry, Little Rock.

Councilor, First District—L. H. McDaniel, Tyroneza.

Councilor, Third District—J. O. Rush, Forrest City.

Councilor, Fifth District—D. E. White, El Dorado.

Councilor, Sixth District—C. A. Archer, DeQueen.

Councilor, Seventh District—Driver Rowland, Hot Springs.

Councilor, Ninth District—Fount Richardson, Fayetteville.

Councilor, Tenth District—James M. Kolb, Clarksville.

Vice-Councilor, First District—W. E. Berry, Jonesboro.

Vice-Councilor, Second District—Hugh Edwards, Searcy.

Vice-Councilor, Third District—J. Max Roy, Forrest City.

Vice-Councilor, Fourth District—H. W. Thomas, Dermott.

Vice-Councilor, Fifth District—George Burton, El Dorado.

Vice-Councilor, Sixth District—E. V. Dildy, Nashville.

Vice-Councilor, Seventh District—H. King Wade, Jr., Hot Springs.

Vice-Councilor, Eighth District—Edwin F. Gray, Little Rock.

Vice-Councilor, Ninth District—Lee A. Dean, Rogers.

Vice-Councilor, Tenth District—Roy I. Millard, Russellville.

Delegate, American Medical Association—R. B. Robins, Camden.

Alternate, American Medical Association—Earle H. Hunt, Clarksville.

By motion (Millard-Dixon) the report of the Nominating Committee was accepted.

By motion (Hawkins-Gray) all nominees other than President-Elect were elected by acclamation. The Delegates then cast votes for President-Elect.

By vote of the Delegates, S. A. Drennen of Stuttgart was elected President-Elect.

The report of Reference Committee No. 1 was read by H. T. Smith, chairman.

REFERENCE COMMITTEE No. 1

H. T. SMITH, Chairman

Your Reference Committee No. 1 has considered the following Committee Reports and advances the following remarks thereon:

Local Arrangements Committee

The work of this Committee speaks for itself. The members have done an excellent job in all respects and this Reference Committee approves its recommendations pertaining to future Society Sessions and advises their acceptance by the House of Delegates.

Program Committee

The program which this Committee arranged for this Session is outstanding in all respects and it is to be congratulated on the presentations of the various symposiums and sections offered the members this year. It is the opinion of this Reference Committee that the Program this year is one of the best in many years.

Medical Legislation Committee

Under severe handicap, this committee has done a wonderful piece of work and deserves much commendation. We recognize the untiring efforts of Dr. Joe Shuffield on behalf of our members and his advice thereto, as presented in this Report, and he deserves much commendation by the Society. We advise the Society's close cooperation with the Medical Legislation Committee in the future.

Veterans Administration Committee

This Report is accepted and approved. We have studied this Report with careful consideration and recognize that there is much work to be done in the future to control present abuses in Veterans Administration Hospitals. The VA Committee must continue in its efforts to accomplish a working understanding between the medical profession and the Veterans Administration.

Mental Hygiene Committee

This Report is accepted and approved. We commend the Committee for its work during the past year.

Medical Service Committee

We accept and approve this Report as presented. We recommend that the Committee continue in its efforts next year to accomplish those aims which, to a large measure, were thwarted during the past year.

Committee on Auxiliary

This Report is accepted and approved as published in the March, 1951, issues of the Journal of the Arkansas Medical Society and we recommend the acceptance by the Society of the recommended appropriations as enumerated in the supplementary Committee Report. Your Reference Committee acknowledges the fact that our Auxiliary is vitally necessary to organized medicine in all respects and we congratulate Auxiliary members in the enormous amount of time they have spent in behalf of our cause.

Rural Health Committee

This Report is accepted and approved. Your Reference Committee recommends, however, that more intensive work be carried on in Arkansas with respect to Rural Health matters in the future.

Cancer Control Committee

This Committee Report is accepted and approved. The Committee should be congratulated in its continued successful work in the state.

Maternal Welfare Committee

The Report is accepted and approved. Your Reference Committee acknowledges the existing need for even greater effort in matters pertaining to maternal welfare.

Committee on Liaison with the State Board of Health

This Report was accepted and approved and the Committee is to be congratulated on its work during the year.

State Medical Board

Your Reference Committee commends this complete Report as submitted by the Secretary of the State Medical Board. Your Reference Committee sincerely hopes that better medical laws may be enacted in the future to help the Board carry on its work even more successfully.

Medical Education Committee

Your Reference Committee heartily endorses the Report of the Medical Education Committee and recommends the Society's adoption of all the recommendations contained therein.

Constitution Revision Committee

Your Reference Committee has carefully studied the proposed amendments as presented by this Committee and congratulates them on their excellent proposals. It is your Reference Committee's recommendation that the Society approve for adoption all the proposed amendments as presented.

AMA Delegate Report

This Report is accepted and approved. R. B. Robins is to be commended on his clear presentation of this Report and it is the hope of the Reference Committee that he may continue to represent this Society at AMA Sessions in the future.

Report of the Treasurer

This Report is accepted and approved and your Reference Committee commends the outstanding work of Dr. Dan Autry during this, his first year, in this office.

Report of Committee on Committee Reorganization

Your Reference Committee has studied carefully this Report and is thoroughly in accord with the recommended committee changes. We recommend its adoption by the Society.

By motion (Gray-Hawkins) the report of Reference Committee No. 1 was accepted.

The report of Reference Committee No. 2 was then read by Roy I. Millard, chairman.

REFERENCE COMMITTEE No. 2

ROY I. MILLARD, Chairman

The following Committee Reports which bear no specific recommendations are accepted and approved as prepared and presented in the Journal of the Arkansas Medical Society for March, 1951, and as presented or supplemented at the meeting of the Arkansas Medical Society April 23, 1951.

1. Necrology
2. Legal Affairs
3. Extension of Medical Care
4. Hospital Relations
5. Heart
6. Grievance
7. Cancer
8. Procurement & Assignment
9. Scientific Exhibits

Military Medicine

The Reference Committee approves the report of the Committee.

This Committee wishes to call special attention to the following:

1. Recommendations as to the order in which physicians are to be called to active military duty. These are as follows:
 - a. Physicians educated at government expense and have had no active military service.
 - b. Physicians trained at their own expense but deferred from active service to gain their education.
 - c. Physicians deferred from active service because of minor physical defects who were able to carry on private practice during World War II.
 - d. Veterans of World War I and II in reverse ratio to their length of active service.
2. This Committee wishes to emphasize the suggested training program in conjunction with the University of Arkansas School of Medicine for physicians for the treatment of injuries incident to a military disaster.

Industrial Health

The Reference Committee wishes to commend the Industrial Health Committee for its work.

This Committee approves four proposals which were submitted by the Industrial Health Committee. These proposals are:

1. That the Committee be enlarged to include an internist, dermatologist, a member of the staff of the State Health Department, two or more General Practitioners who are part-time industrial physicians (if such are available), surgeon, ophthalmologist and an orthopedist. It is also recommended that this personnel be appointed for terms of various lengths so that some continuity of the work of the Committee may be carried over from year to year.
2. That each county medical society where there is a considerable amount of industry organize a Commit-

tee on Industrial Health within the county medical society.

3. That the State Committee promote the organization of such County Committees by such measures as sending speakers to meetings of the Councilor District and county medical societies.
4. That liaison be established with the State Industrial Nurses Association and a representative of this group sit with the Committee in its function.

The Reference Committee wishes to approve the five objectives and the four projects listed by the Committee.

Public Health

This Committee should be commended for its work and its complete report. The Reference Committee wishes to approve the Committee's recommendation that steps be taken to provide pre-marital examinations.

Post-Graduate

The Reference Committee has carefully considered the report of the Post-Graduate Committee and its addendum report.

The Reference Committee wishes to make the following recommendations:

1. Urge a continuation of post-graduate work.
2. Urge that the Post-Graduate Committee of the Arkansas Medical Society take a more active part in whatever post-graduate courses are made available to the profession.
3. It is the opinion of this Committee that the cost of post-graduate courses should be met by fees collected from physicians attending the courses.
4. This Committee wishes to urge the Medical School to expand its post-graduate facilities as rapidly as possible.

Tuberculosis

The Reference Committee approves the brief report of the Tuberculosis Committee.

We wish to make three recommendations:

1. Urge that this Committee keep in close liaison with the Tuberculosis Association.
2. Urge a close liaison with the Tuberculosis Sanitarium.
3. Urge a close liaison with the X-ray program of the Health Department.

Child Welfare

The Reference Committee wishes to urge the adoption of five recommendations of this Committee:

1. A continuation of the program of the Health Department in conjunction with the EENT section of the Arkansas Medical Society.
2. Improvement in reporting birth weights.
3. Study by county medical societies of neonatal deaths.
4. Urging early immunization.
5. Improvement of facilities for local care of poliomyelitis cases.

Committee for Liaison with State Hospital for Nervous Disorders

The Reference Committee approves the report of this Committee and urges the adoption of the nine recommendations included in the Arkansas Mental Health plan.

Report of the Executive Secretary

The Reference Committee wishes to express approval of the excellent work of the Executive Secretary and of his very complete report. Especially noted is the percentage of members paying AMA dues. This Reference Committee urges all physicians to pay their National Dues. The Com-

mittee further wishes to approve and recommend the adoption of the Executive Secretary's recommendation for a Council appointed Budget Committee.

The Reference Committee feels that it expresses the sentiment of the Society in expressing sincere regret that Mr. Wrightsman is leaving his present position, and in thanking him for a job well done.

Council

The Reference Committee wishes to express approval of the good work of the Council.

Legal Counsel

The report is approved. The Committee urges every member of the Society to pay particular attention to Mr. Warren's remarks in regard to the confusion concerning legislative activities. Every physician should familiarize himself with the policies of the Society as proposed by the Council and House of Delegates, which should represent the thinking of a majority of Arkansas physicians.

By motion (Reed-Hawkins) the report of Reference Committee No. 2 was accepted.

Mr. Sid Wrightsman, Jr., read a supplementary report of the Council.

SUPPLEMENTARY COUNCIL REPORT

The Council of the Arkansas Medical Society met at the Hotel Marion, April 24th, and the following action was taken:

1. Authorized payment of expenses for the 75th Annual Session with proper acknowledgments of gratitude forwarded to all sources who cooperated in giving the Session.

2. Authorized payment of annual honoraria to Secretary Brooksher and Mr. Deisch, counselor.

3. Unanimously endorsed the proposed Practical Nurses Program for the State of Arkansas.

4. Referred to the Legal Affairs Committee a resolution presented by delegates of Garland County Medical Society to authorize the changing of its local membership requirements, to be reported on by that Committee at a later date.

5. Unanimously adopted the following resolution pertaining to T. T. Ross, former State Health Officer:

"As Chief Health Officer of the State of Arkansas for the past ten years, Dr. T. T. Ross has not only capably carried on his duties as such, but in cooperation with us, he has been called upon to serve as adviser and agent for our Society in innumerable situations of most diverse and difficult character, for the successful management of which an unusual store of energy, tactfulness and good judgment were required.

"All of these qualities, Dr. Ross had displayed in the highest degree, to the marked profit of our State, and to the complete satisfaction of this Society.

"THEREFORE, BE IT RESOLVED by the House of Delegates of the Arkansas Medical Society, in regular session on April 25, 1951, that we commend our colleague as one who has always met the highest ideals of our profession. The privilege of sharing his friendship was one which can never be forgotten."

6. Unanimously adopted and approved the following resolution for presentation by our AMA Delegate at the next Annual Session of the American Medical Association:

WHEREAS, Economy in government presupposes a wise expenditure of funds which have been exacted from the people by taxation, and

WHEREAS, It is desirable that a halt be put to the in-

discriminate granting of federal subsidies for purposes which are amply able to pay their own way, and

WHEREAS, A beginning in such a reform should be immediately inaugurated, to commence not with others, but with the advocates of such a reform, and

WHEREAS, the post-graduate courses provided from tax funds by the Federal Government are highly instructive and beneficial to the medical profession, but can be financed without difficulty by those who are the recipients of such educational services, and it is the desire of the medical profession of Arkansas to pay personally such fees for the post-graduate instruction as is received in the future, now, therefore,

BE IT RESOLVED, By the House of Delegates of the Arkansas Medical Society that our Congressional Delegation be and are hereby requested to make such efforts as may be necessary to eliminate from future budgets, the expense of conducting courses of post-graduate work for the medical profession, and

BE IT FURTHER RESOLVED, That our Delegates to the American Medical Association be instructed to present this resolution to the House of Delegates of the American Medical Association in annual session at Atlantic City, June 11-15, 1951.

The Council of the Arkansas Medical Society met at the Hotel Marion on April 25th, taking the following action:

1. Authorized telegram of greeting to be sent to S. W. Douglas of Eudora.

2. Adopted the report of the special Council Budget Committee.

3. Recommended the raising of annual membership dues in the Arkansas Medical Society to \$25.00, beginning January 1, 1952.

4. Recommended that a \$5.00 registration fee be charged members at future Annual Sessions of the Arkansas Medical Society.

By motion (Dixon-Monfort) the supplementary Council report was accepted.

By motion (H. T. Smith-Allbright) dues in the Arkansas Medical Society were raised to \$25.00 annually, effective January 1, 1952. The motion unanimously carried.

Mr. Sid Wrightsman, Jr., read the following amendments to the Constitution and By-Laws of the Arkansas Medical Society, as presented during the 74th Annual Session in 1950:

"Resolved, that Article XI of the Society Constitution be amended to read as follows:

"Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$25.00 per capita per annum, except on four-fifths vote of the Delegates present; provided, that membership in this Society shall be restricted to those who possess the qualifications set forth in Article IV and who pay the annual dues of the American Medical Association in addition to dues to their component and state society. Funds may also be raised by voluntary contributions, from the Society's publications and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Society for publications, and for such other purposes as will promote the welfare of the profession.

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—Selesnick, S.: *The Treatment of Amebiasis*, Connecticut M. J. 12:946 (Oct.) 1948.

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RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

"Resolved, that Section 2, Chapter VII, of the Society By-Laws be amended to read as follows:

"Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual written report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed on a properly itemized statement; but this shall not be construed to include his expenses in attending the Annual Session of the Society. A Vice-Councilor for each district shall be chosen at the same time and in the same manner as the Councilors are selected. The duties of the Vice-Councilors shall be to assist the Councilors in the performance of their duty, to act in their stead at all meetings in the absence of the Councilor, to attend meetings of the Council and to vote in the absence of the Councilor, provided that the Vice-Councilor shall have the privilege of the floor at all meetings."

Discussion from the floor ensued with reference to the amendment to Article XI of the Constitution, making payment of the \$25 American Medical Association membership dues a provision for membership in the Arkansas Medical Society. By motion (Richardson-Dickinson) the resolution was tabled.

By motion (Dixon-Browning) the amendment providing for Vice-Councilors in Section 2, Chapter VII of the Society By-Laws was adopted and those members designated by the Nominating Committee to be Vice-Councilors were elected by acclamation.

By motion (Monfort-Hawkins) the House then adjourned.

FINAL GENERAL SESSION Wednesday Afternoon, April 25th

Immediately following adjournment of the final session, President Hunt called the final general session to order.

The following Past-Presidents were seated on the rostrum: A. S. Buchanan, C. A. Archer, L. T. Evans, H. King Wade, H. T. Smith, S. J. Allbright, M. L. Norwood, Joe Shuffield, H. Fay H. Jones and Will Mock.

President-Elect Charles R. Henry was escorted to the rostrum by Fount Richardson and was given the gavel by President Hunt, who spoke briefly, expressing gratitude to the Society for the courtesies extended him during his term as President.

President Henry then took the following oath as administered on the rostrum by Chief Justice Griffin Smith of the Arkansas Supreme Court:

"I solemnly swear that I shall carry out the duties of the

office of President of the Arkansas Medical Society to the best of my ability. I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving the health standards of the American people and to the task of bringing increasingly improved medical care within the reach of every citizen. I shall uphold the Constitution of the United States and the Constitution and By-Laws of the Arkansas Medical Society at all times. I shall champion the cause of freedom in medical practice . . . and freedom for all my fellow Americans.

"I do solemnly swear that I will discharge the duties of this office to the best of my ability, so help me God."

President Henry then addressed the House, expressing gratitude for the honor bestowed on him and outlined in detail his proposed program for the Society during his term of office.

President-Elect S. A. Drennen was escorted to the rostrum by Fount Richardson and Ed Gray and he thanked the Society for his election.

By motion (Hunt-Dixon) the Society accepted an invitation of the Pulaski County Medical Society, extended by Edgar J. Easley, to meet in Little Rock in 1952.

By motion (Monfort-Hundley) the Society adjourned sine die.

REGISTRATION—1951 Annual Session

Members, 503; Visitors, 36; exhibitors, 35 and medical students, 170. TOTAL, 744.

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Hotel Marion, Little Rock, Arkansas

JUL 21 1951

San Francisco, 22

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FORT SMITH, ARKANSAS, JULY, 1951

No. 2

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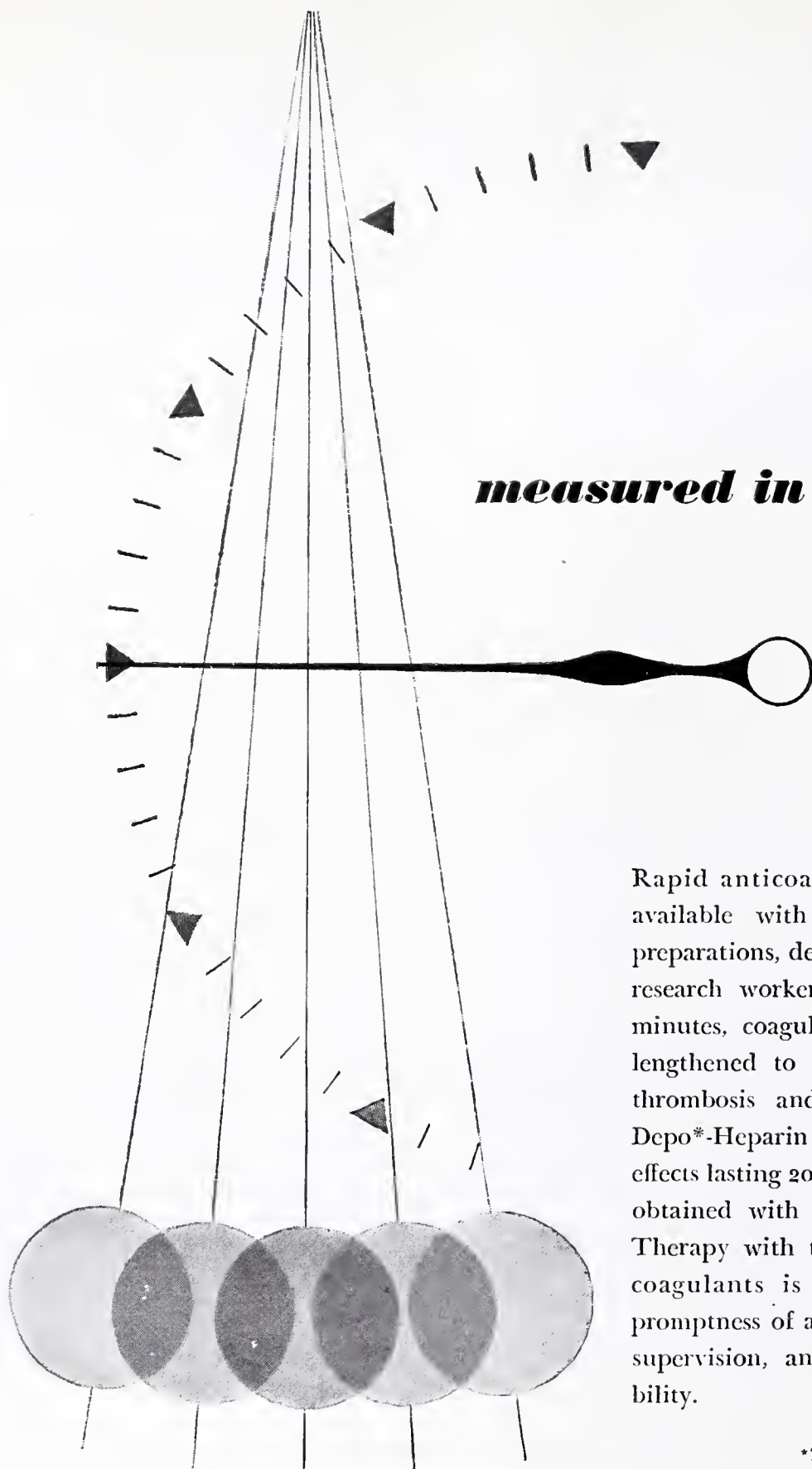
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No. 2

THE PRESENT STATUS OF ACTH AND CORTISONE THERAPY IN ALLERGIC DISEASES*

THOMAS G. JOHNSTON, M.D.**
Little Rock

The rapid development in the widespread use of ACTH and Cortisone in allergic diseases has resulted in enough confusion and misunderstanding to justify a summary of their present status. Particular reference will be devoted to the author's own observations on over 40 cases treated during the past year. Other information has been gained from the literature, chiefly from the First Clinical ACTH Conference (1) and from papers presented (2-10) on this subject at the American Academy of Allergy meeting held in New York City in February, 1951.

Historical

Following the successful use of ACTH and Cortisone by Hench (11, 12) early in 1949 in patients with rheumatoid arthritis and rheumatic fever, a few case reports began to appear in American journals in the fall of 1949 concerning treatment of allergic diseases with ACTH and Cortisone. These include reports by Bordley and associates (13), Rose and his group (14), and Randolph and Rollins (15), and Thorn and associates (16). The fact that the collagen diseases including rheumatic fever had responded dramatically suggested that ACTH and Cortisone would be beneficial in the allergic patient.

Mechanism

The exact mechanism of action of ACTH and Cortisone is not understood, but these drugs would appear to exert their influence at the cellular level by preventing injury to the tissue cell. Prevention of the inflammatory response occurs not only in the antigen-antibody reaction but in non-allergic types of reactions as well. An example of this is seen when the ordinary inflammatory reaction produced in the conjunctiva by

the injection of glycerine is prevented by prior administration of ACTH or Cortisone. The non-specific reaction plus the fact there appears to be no change in size of the whealing in skin testing, either during or following therapy, suggests that ACTH and Cortisone do not seem to act solely on the allergic mechanism.

It has been suggested (17) that the allergic patient has a hypofunctioning adrenal cortex as indicated by a low Robinson-Power-Kepler (18) test, a hypoglycemic response to the insulin tolerance test, low urinary 11-oxysteroids, and a negative Thorn test (19). (The Thorn test is the quantitative drop of eosinophiles after the injection of 25 mg. of ACTH. In normally functioning adrenals this drop should be over 50% in four hours.) Evidence for decreased adrenal function in allergic patients is not conclusive, however, and further work is being done along these lines.

Types of Allergic Diseases Treated

During the past two years the following allergic diseases have been treated with ACTH and Cortisone:

Bronchial asthma	Loeffler's syndrome
Allergic rhinitis	Serum sickness
Hay fever	Erythema multiforme
Atopic dermatitis	Henoch-Schonlein's purpura
Contact dermatitis	The Collagen Diseases such as
Urticaria	Lupus erythematosus, Periarthritis nodosa, Scleroderma,
Drug eruptions	and Dermatomyositis
Sympathetic ophthalmia	

These drugs have also been used in a number of other conditions, such as insulin resistance, in which hypersensitivity is suspected of playing a role.

Indications for Therapy

ACTH and Cortisone seem to be indicated in severe allergic diseases, such as status asthmaticus, severe intractable asthma, and severe drug eruptions. Treatment of all allergic patients with these drugs is not justified because underlying immunological mechanisms are not altered. There is considerable doubt that indefinite administration of either of these drugs can be carried out.

Contra-indications for Therapy

At present the following is a brief list of

* Submitted for publication March 16, 1951.

** Clinical Instructor in Medicine, Department of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan from July, 1950 to July, 1951.

some of the contra-indications to therapy with ACTH or Cortisone:

- | | |
|---------------------------|-----------------|
| 1. Cardiac decompensation | 5. Nephritis |
| 2. Diabetes mellitus | 6. Psychoses |
| 3. Hypothyroidism | 7. Severe acne |
| 4. Hyperadrenalism | 8. Peptic ulcer |

Management of the Case

Whenever ACTH or Cortisone is to be given, it is best to hospitalize the patient, as ambulatory cases show less improvement, require larger doses of medication, and demonstrate varied venal response, as well as the increased danger of complications. Adrenal function tests with 0.3 cc. of 1:1000 epinephrine hydrochloride or 25 mg. of ACTH should be used to measure the quantitative drop in eosinophil count. A negative response may suggest inadequate function of the adrenal cortex, in which case Cortisone might be used to better advantage. Determination of 11-oxysteroids and 17-ketosteroids in the urine would corroborate the diagnosis of hypofunction of the adrenals, but the difficulty in performing and evaluating these tests as well as the expense precludes their routine use.

Blood pressure readings, quantitative eosinophile counts, urinary volume output, and weight should be charted daily, and urinary sugar determinations should be obtained every other day. The effect upon sodium-potassium balance by the adrenal steroids makes it necessary to check the pulse and the state of the heart (EKG) for evidence of low blood potassium. Only a slight change in the sodium-potassium balance should occur on moderate doses of ACTH and Cortisone.

An antibiotic such as penicillin, aureomycin, chloromycetin, or terramycin should be given in conjunction with ACTH and Cortisone to combat or prevent infectious processes when present. Some of the manifestations of infections, such as pain, fever, tachycardia, and increased sedimentation rate, are abolished or masked during therapy, only to flare following discontinuation of the drugs.

An attempt should be made to decrease the dosage as rapidly as possible in a step-wise manner. The method will be discussed in the following paragraph.

Dosage

At present ACTH must be given by injection, usually in 20 to 40 mg. doses every six hours, followed by a step-wise decrease of 5 mg. per dose until medication is discontinued. A suggested dosage schedule for adults with

chronic allergic conditions such as intractable asthma is as follows:

Day	Dosage of ACTH	Total Daily Dosage
1	20 mg. every 6 hours	80 mg.
2	20 mg. every 6 hours	80 mg.
3	20 mg. every 6 hours	80 mg.
4	15 mg. every 6 hours	60 mg.
5	10 mg. every 6 hours	40 mg.
6	5 mg. every 6 hours	20 mg.
7	5 mg. every 12 hours	10 mg.

A long acting preparation of ACTH called ADACTAR, used by Rose (7) and a repository ACTH, used by Harvey (10) reduce the need of injections to once or twice daily. As yet, these preparations have been produced in insufficiently large quantities for general use.

Cortisone may be given by mouth (either in tablet or liquid form) or by intramuscular injection. In some cases it has been known to be effective when applied locally, as in eye drops in the treatment of sympathetic ophthalmia. Oral Cortisone is readily absorbed, acts more quickly and is thus perhaps preferable to Cortisone by injection. Dosage by mouth should be equal to or slightly greater than by injection. Each tablet of Cortisone contains 25 mg. and a liquid preparation may be made by using a teaspoonful of suspension to equal 25 mg. Cortisone has a bitter taste and should be taken rapidly, not being allowed to dissolve in the mouth. It is possible to mask the flavor by using syrup of cherry or orange as a vehicle (20) but most patients will tolerate the suspension. The required dosage varies considerably from patient to patient and depends on the type and severity of the disease process. For adults the dosage of Cortisone should be 100 mg., b.i.d., until maximum response is obtained, then 100 mgm. daily, decreasing the dosage until medication is discontinued. A suggested dosage schedule for Cortisone in an adult with chronic asthma is as follows:

Day	Total Daily Dosage of Cortisone
1	200 mg.
2	200 mg.
3	200 mg.
4	100 mg.
5	100 mg.
6	50 mg.
7	50 mg.
8	25 mg.
9	25 mg.
10
11	25 mg.
12

Children should receive about one-half the adult dose.

Response

The response usually begins in 24 hours with the maximum response occurring in 3 to 5 days. Some cases may begin to respond in a matter

of 4 to 5 hours while others will not respond until 8 to 14 days have elapsed. Of course, there are some who will not respond at all.

With this medication the patients usually notice an increase in sense of well-being even to the point of euphoria. In most patients physical rest is promoted and there is improvement in nutrition and hydration, as well as in sense of well-being. (6)

Results

Approximately 75% of patients in our experience have shown good or marked improvement. However, the results are difficult to evaluate because of the fact that adequate control studies are almost impossible to obtain. Many patients will respond beneficially after a few days of hospitalization alone. It is a well-known fact that if a large number of people are treated with a new drug, regardless of its pharmacological action, some of them will improve. In addition, these are the so-called "wonder drugs," and the psychological lift in using such medications will cause some subjective improvement. Also, these drugs tend to have an euphoric effect in themselves, thus making evaluation very difficult. Not all cases respond; in fact, some may be made worse by this therapy.

Relapse and Rebound

Almost all the cases will relapse in from 4 days to 4 months, unless the offending agent or cause is removed. Thus, these drugs are not a specific treatment. Often a rebound phenomenon is observed in which the patient is worse following cessation of therapy than prior to therapy.

Re-treatment

Several of our cases have had 3 or 4 courses of these drugs, while other workers report as many as from 6 to 11 courses in some of their patients. The results in re-treatment may be as good, better, or worse than with the first treatment. However, in the majority of cases the repeated courses are not quite as effective as the previous ones.

Side Reactions (2-10)

Side reactions are numerous, some being mild and transient while others are lethal. The fact that the incidence of side reactions increases with the length of treatment precludes long term therapy without great hazards.

Several deaths have occurred from these drugs. The author saw a patient with bronchial asthma under treatment with ACTH who exsanguinated from a bleeding duodenal ulcer, although he had previously had no ulcer symptoms. Bleeding and perforation of ulcers are

some of the more common of the serious complications. Since the chief side reactions seem to involve the endocrine, psychic and neurological systems more than any others, the following table of side reactions is presented:

Endocrine		5. Headache
1. Marked and rapid weight gain	6. Convulsions	7. Psychoses—some severe and of prolonged duration
2. Generalized edema		
3. Glycosuria		
4. Acne		
5. Rounding of the face		
6. Hirsutism		
7. Loss of hair		
8. Delayed menstruation		
9. Pigmentation		
10. Amenorrhea		
Psychic & Neurological		Others
1. Nervousness		1. Hemorrhage from peptic ulcer
2. Mental depression		2. Perforation of ulcer
3. Cerebral confusion		3. Ulceration of vocal cords
4. Insomnia		4. Hypertension
		5. Right-sided heart failure
		6. Weakness
		7. Albuminuria

Rose (7) reports one patient who died of pneumonia following therapy and I have seen a full-blown case develop two days following cessation of therapy with these drugs. I have also seen an allergic skin reaction to iodides as well as upper respiratory infections and common colds develop during therapy with ACTH and Cortisone.

Several cases of allergy to ACTH have been reported (7, 21, 22). Some of these had an anaphylactic type of response with collapse, while others had urticarial responses. In case of allergy to pork, one should elect to use Cortisone or ACTH derived from beef pituitary glands.

Maintenance Therapy

Several patients have been maintained fairly satisfactorily on small doses, such as, ACTH 10 mg. daily or 25 mg. once every two or three days and Cortisone acetate 25 to 50 mg. once every two or three days. Prolonged administration of either ACTH or Cortisone, however, is usually not advisable due to the increased frequency of toxic reactions. Administration of these drugs continuously over a long period of time in children or adolescents is most likely to lead to serious changes such as growth disturbances.

When ACTH or Cortisone is to be administered continuously over a long period of time a low sodium diet (800 mg.) should be prescribed and potassium chloride in 0.5 gram doses by mouth should be given t.i.d. in order to prevent the development of potassium deficiency. In order to prevent hypofunction of the thyroid it is also advisable to give 0.030 to 0.060 grams of desiccated thyroid daily.

Discussion

Despite the dramatic temporary cessation of symptoms observed with ACTH and Cortisone therapy in allergic diseases, one should not conclude hastily that the problem of allergy is about to be solved. The fundamental process by which ACTH and Cortisone affect allergic diseases seems not to be primarily tied up with the fundamental etiology of allergy. These drugs do not appear to have a consistent direct effect on the antigen-antibody reactions.

It appears that with long periods of administration of the hormones the patient will become less capable of coping adequately with any superimposed strain. This fact may in part be demonstrated by the occurrence of overwhelming infections during or after the cessation of ACTH or Cortisone therapy.

ACTH and Cortisone are not substitutes for allergic management either in adults or children and therefore do not replace the long proven fundamental immunological approach. Every allergic patient must be studied carefully from the immunological viewpoint.

Summary and Conclusions

1. ACTH and Cortisone are not a panacea for the treatment of allergic diseases.

2. ACTH and Cortisone should be reserved for those cases of severe allergic diseases such as status asthmaticus, severe intractable asthma, and severe drug eruptions.

3. Administration of ACTH or Cortisone is not without danger and unusual precautions must be taken while these drugs are administered such as: 1. Daily blood pressure readings. 2. Daily quantitative eosinophile counts. 3. Daily urinary volume output. 4. Urinary sugar determinations, and 5. Check on the pulse and state of the heart (EKG) for potassium deficiency.

4. They should not be given in the presence of cardiac decompensation, diabetes mellitus, hypothyroidism, hyperadrenalism, nephritis, psychoses, severe acne, and peptic ulcer.

5. It is advisable to administer antibiotics simultaneously with ACTH and Cortisone in patients with bronchial asthma.

6. On prolonged administration a low sodium diet, oral potassium chloride, and desiccated thyroid should be given.

7. A rest period between courses of Cortisone or ACTH therapy seems advisable to prevent undue depression or atrophy of the adrenal cortex or posterior pituitary.

8. The greatest proven value of these drugs

in allergic diseases so far has been in the field of research and investigation.

9. ACTH and Cortisone are not substitutes for careful allergic management of patients with allergic diseases.

10. In an acute allergic emergency such as an immediate serum reaction, anaphylactic shock, and acute asthma, ACTH and Cortisone do not work rapidly enough to save the patient's life. Administration of epinephrine, aminophylline, oxygen, and similar measures are indicated in such cases.

11. ACTH and Cortisone are useful measures in special allergic conditions but they should not be employed as a short cut to careful diagnosis and more rational allergic therapy.

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CASE REPORT FROM THE UNIVERSITY OF ARKANSAS SCHOOL OF MED- ICINE AND UNIVERSITY HOSPITAL CLINICAL PATHOLOGICAL CONFERENCE

A. NETTLESHIP, M.D.

Editor

Case Presentation: Dr. James H. Growdon
Unit No. A-2169

Summary of Clinical History

Chief Complaint: This patient's chief complaint was that for one year prior to his admission to the hospital he had had gastric pains which were marked by sudden onset of indigestion. He had been in good health until December, 1949, at which time he had an attack of indigestion, characterized by an epigastric pain which lasted for several hours. The patient was nauseated but could not vomit. This indigestion was relieved by MgSO₄ and has not recurred since. On December 5, 1949, the patient had an attack of "flu" with aching joints, fever, and chills. He went to a local doctor who gave him milk of magnesia and some red liquid medicine for the "flu". The patient did not recover from this illness and has since had an evening fever, and a cough productive of blue and yellow sputum amounting to half a cup per day. He states that the sputum smells and tastes bad. He denies hemoptysis or chest pain. About 7 weeks before admission the patient developed a weakness of the right upper extremity which gradually progressed to an almost complete paralysis of that limb. Weakness has been slowly progressive in the left lower extremity. 3-4 weeks ago the patient developed a constant aching pain in the lower back over the sacral area.

We will notice from the complaints which concerned the chest that this patient may have had bronchiectasis with bronchitis and lung abscesses. The finding of weakness in the lower extremities is suggestive of spinal cord lesion or perhaps a lesion higher up in the brain.

System Review: A system review revealed frequent attacks of indigestion and constipation; nocturia seven times a night. Appetite has been fair. There is an undisclosed amount of weight loss. From this we may assume that the patient has some kind of chronic illness, either chronic infection or carcinoma. He has had a chronic cough all his life which is difficult to understand in light of his present illness.

Family History: The brother had a diagnosis of

coccidioidomycosis made at this hospital one year ago and the patient had been associated with him constantly.

This family history of coccidioidomycosis must be kept in mind so that we may find out whether or not he has the same illness as his brother.

Physical Examination: Blood pressure 140/70. P. 96. R. 20. T. 98.6. General appearance: Well developed, poorly nourished elderly colored male who was brought to the hospital in a wheel chair. Patient was cooperative but confused at times and thought that he was in Prescott, Arkansas. **Skin:** There were small subcutaneous nodules over the surface of the scalp, neck, and upper back. These vary in size from 5 mm. to 1 cm. in diameter. Some appear deeper and perhaps not attached to the skin. **Lymphadenopathy:** There were small shotty cervical nodes bilaterally. Pupils reacted to light and fundi showed marked tortuosity of the arterioles with silver wiring and AV nicking. The **lungs** were negative. **Heart:** PMI was in the 5th intercostal space in the midclavicular line. Normal sinus rhythm. No murmurs. **Abdomen:** Flat, no masses or tenderness, no organs palpable. **Extremities:** Almost complete paralysis of the right upper extremity and weakness of the right lower extremities with considerable atrophy. **Neurological:** Diminished bilateral patellar reflexes. There was hyperactive biceps in the right upper extremity. Abdominal reflexes were decreased. There was no loss of position sense, no sensory disturbance. No loss of Achilles tendon pain. The babinski was positive on the right. **Rectal** examination revealed a small firm prostate. There was tarry stool on the glove finger.

Blood pressure ranged from 140/70 to 160/80. We found a few subcutaneous nodules which are suggestive of metastatic carcinoma. The finding of these different paralyses is suggestive of widespread metastases. The finding of tarry stools also is suggestive of high gastro-intestinal lesion.

Laboratory Examinations: Urinalysis: sp. gr. was 1.025 with an occasional pus cell, negative albumin, and negative glucose. Three subsequent urinalyses were within normal limits.

Blood count showed 12 grams hemoglobin. 4.24 RBC. 7,250 WBC with a normal differential. The Wintrobe sedimentation rate was 40 per 30 mm. in one hour. Hematocrit was 29. The STS was negative. Acid phosphatase 2.4 U. Alkaline phosphatase was 43.5 U. Calcium 8.5 mgm%. TSP was 6.68 grams %. Albumin 3.8. Globulin 2.8.

Spinal tap revealed a pressure of 250 mm. of

water, with normal dynamics. The fluid was clear. Cell count was 0. Protein was 64 mgm%. The chlorides 734 mgm%.

The stool was positive for occult blood.

The coccidioidin skin test was negative dilution of 1:100. The OT test was negative with dilution 1:1000. The histoplasmin skin test was negative with dilution of 1:100. The blastomycin skin test was negative in dilution of 1:100.

The electrocardiogram showed T. wave inversion in all leads. The interpretation was an ischemic pattern, possible myocarditis.

X-ray studies: GI series revealed an apparent rigidity of the body of the stomach suggestive of a neoplastic infiltrative process in this location, possibly an inflammatory process. A repeat GI series revealed the same findings. A barium enema was negative. Bone films of the hands were negative. Bones of the pelvis, spine and lower ribs showed areas of round sharply demarcated increased densities which were suggestive of metastatic lesions. There was evidence of an old injury in the right hip with partial destruction of that joint. A chest film revealed an increase in cardiac size in the region of the left ventricle with possible sclerosis of the aortic arch consistent with the diagnosis of hypertensive arteriosclerotic heart disease. There were probable enlarged lymph nodes especially in the right hilus with small nodulations of various sizes scattered throughout both lung fields suggestive of a possibility of a metastatic malignancy.

A biopsy of the skin and subcutaneous nodules on the back of the neck was not characteristic of any specific disease. Biopsy of the skin in the right axilla revealed microscopic findings which could be compatible with mycosis fungoides.

The patient was quite ill on admission to the hospital and as rapid and complete a work-up as possible was done. X-ray studies are most revealing and there seemed to be little doubt about a primary neoplasm of the stomach. We considered carcinoma, lymphosarcoma, and in a few of the bone findings Padgett's disease of the bone, or possibly even a second carcinoma, a primary prostatic one, metastatic to the bone. We submitted a biopsy to the Pathology Department which was unwilling to come right out with a diagnosis of mycosis fungoides but felt that the lesion might be compatible with this disease.

We can say then in summary that this patient died rather quickly. We had made a diagnosis of probable carcinoma of stomach with metastasis to bones, lungs, spinal cord and central nervous system. He was also believed to have had widespread generalized arteriosclerosis.

Course and Treatment: The treatment was supportive with intravenous fluids and vitamins.

The patient was confused and disoriented throughout the hospital stay. He refused to eat, grew weaker and expired on March 27, 1950, at 11:45 p. m.

We accept the pathologist's report of mycosis fungoides but were somewhat in doubt as to the meaning of this diagnosis; as to whether it was possible that the patient had a lymphosarcomatous growth originating in the stomach with spread to the skin or the other way around. We felt that he also had chronic bronchitis with bronchiectasis and abscesses of the lungs.

Final Clinical Diagnoses

Carcinoma of the stomach with metastasis to the lungs, bones, spinal cord and central nervous system.

Generalized arteriosclerosis.

Chronic bronchitis, bronchiectasis, and abscesses of the lungs.

Mycosis fungoides?

Pathological Diagnoses

Adenocarcinoma and squamous cell carcinoma of the stomach, massive with metastasis to regional lymph nodes and bone.

Perforation of carcinoma of stomach with acute fulminating peritonitis.

Bronchitis with bronchiectasis and abscesses of lungs.

Terminal bronchopneumonia.

Adenomatous hypertrophy and hyperplasia of the prostate with retention of urine.

Discussion

Pathologist: We would like to show first the biopsy from the skin section. We were completely wrong about this diagnosis. We called this mycosis fungoides and I must say in retrospect we would still have to consider this a lesion compatible with this diagnosis. The difficulty here is that we so often really do not know exactly what the diagnosis of mycosis fungoides means and for this reason have never made the diagnosis in the department without some trepidation and often with error. Upon close examination of these slides you can see small signet ring cells which have produced a huge amount of scirrhous tissue. The microscopic examination showed a most astonishing, enormous fungating cancer which occupied almost all of the mid-portion of the stomach. It had perforated on the anterior wall. The perforation, you can see, is about 1.5 cm. in diameter. The peritoneum showed an early purulent peritonitis. The lungs showed many areas of bronchopneumonia and

bronchiectatic bronchi in which there was purulent material. The ribs and bodies of the vertebrae were riddled with the glandular carcinoma metastasis.

The microscopic examination of the sections was most revealing. This was a mixed type of gastric carcinoma which contained both glands and squamous carcinoma areas. These were mixed in some areas and separate in others. Both forms metastasized. The squamous cell carcinoma, however, did not metastasize beyond the regional lymph nodes. The remainder of the sections confirm what has previously been stated. We did not find evidence of pulmonary metastases.

TREATMENT OF TINNITIS WITH PARENTERAL VITAMIN A: A PRELIMINARY REPORT*

LOUIS K. HUNDLEY, M.D.

Pine Bluff

Following Lobel's preliminary report on the treatment of deafness in the E.E.N.T. Monthly of May, 1949, and Hollender's editorial on the report in the same issue, we became particularly interested in the claim that tinnitus was relieved early in treatment. This was also borne out in a subsequent report by Anderson, Zoller, and Alexander of New Orleans.

In the average private office few of us have the facilities for conducting the type of research necessary to establish the efficacy of this form of treatment in relieving the various types of deafness. In patients with tinnitus, however, there should be little difficulty in finding out whether or not a patient is relieved of this most annoying symptom. An audiogram at the beginning of treatment and repeated at six-week intervals should give one some idea as to whether there is any marked change in the hearing status of the patients.

In the last nine months we have treated a small group of patients whose chief complaint was tinnitus. It was felt that the results in this group might interest some of the rest of you in using this type of medication.

Treatment routine is simple. Lobel's original formula of vitamin A, 50,000 U in olive oil and Terpenes (Parke-Davis Anatola) was used. Before starting treatment a complete ear, nose and throat examination of each patient was made. A hearing study with audiogram, and tuning forks, and examination of the nasopharynx was

* Read before Section on Eye, Ear, Nose and Throat, Arkansas Medical Society, Fort Smith, April 18, 1950.

done. Previous treatment was evaluated. When it was determined that none of the usual methods of treatment were indicated, they were started on Anatola. Injections of one ampoule (1cc) intramuscularly were given biweekly for a period of six weeks. If improvement of symptoms was found either in decreased hearing loss or diminution of tinnitus the injections were continued.

In over 250 injections we have had no general or local reactions of any significance. Occasionally the arm became a little tender at the site of injection for 24 to 48 hours, but even this is rare. The cost of treatment is small, since at the present time, wholesale price runs about 35 cents per ampoule.

We give here a brief summary of six cases who have received an unbroken course of treatment six weeks or longer.

Case 1—R. R., age 24, white male, Engineering clerk. He has rapidly progressive conduction deafness; under our observation 2½ years. Chronic eustachian salpingitis. Received radium applications in nasopharynx January 1948, with some improvement for six months, then increasing tinnitus and deafness. Received second radium application June 1949. Started on Anatola August 1949, biweekly to date. His tinnitus has definitely improved and now bothers him only at night. Hearing slightly improved.

Case 2—M. B., age 65, white female, bookkeeper. Deaf in right ear since childhood. Left began giving trouble following a cold in 1947. Under our observation since that time. Definite eustachian blockage, Conduction deafness. Tinnitus variable, worse at night. Received numerous tubal inflations. Treated with nasopharyngeal radium applications June 1948. Slight improvement in hearing. Anatola started January 1950. To date there has been no change in hearing, but tinnitus is definitely improved. Never has tinnitus in daytime since third week of treatment.

Case 3—C. R., age 17, white male, school boy, hard of hearing all his life, older brother also deaf. VIII N Deafness with severe tinnitus. Much difficulty understanding speech. Hearing aid makes it worse. Started Anatola February 1950. At end of 4 weeks could understand conversations in same room, talked on telephone for first time in life; tinnitus has almost completely disappeared, although audiogram is unchanged, it is believed that this child can now wear a hearing aid and get along as well as anyone. His treatment will be continued.

Case 4—Mrs. J. H. H., age 70, white female, housewife. Chief complaint tinnitus of two years' duration. Has slight hearing loss with Negative Rinne. Tinnitus not relieved by repeated tubal inflations at E. E. N. T. Clinic in Shreveport. Started on Anatola September 1949. All tinnitus completely disappeared at end of first six weeks, but treatment was continued for additional six weeks, and hearing is now normal.

Case 5—Mrs. H. C. F., age 59, white female, housewife, chief complaint tinnitus of nine months' duration. Relieved for short time by tubal inflation. Negative Rinne; mild hearing loss. Diagnosis catarrhal eustachian salpingitis. Anatola started February 1950. At end of six weeks tinnitus had completely disappeared. Hearing subjectively improved.

Case 6—L. G., age 10, white female, school child. This child developed severe superficial punctate keratitis in June 1949. All local and general treatment failed to halt progress until she was hospitalized August 9, 1949, and given streptomycin intramuscularly and aureomycin locally. Before leaving hospital on August 19, she began to develop vertigo. In six weeks she could not hear ordinary conversation and had developed severe tinnitus. Her vertigo became so severe that she could not walk without support. She was placed on Anatola November 1, 1949. In six weeks her tinnitus disappeared, and her hearing improved. Her vertigo has improved enough that she can walk by herself. Treatment has been continued to date.

I realize that this small number of cases and the short period during which they have been observed means very little, but I feel that the results so far obtained certainly indicate a necessity for widening the scope of these studies. We have at present six more cases under treatment.

In summary, six cases of tinnitus were observed for periods of continuous treatment from six weeks to six months. All were given Anatola (P. D.) 1 cc intramuscularly biweekly.

(1) Tinnitus was either relieved or improved in all cases by the end of the first six weeks.

(2) Hearing was improved in 4 cases and unchanged in 2 cases.

(3) Two cases had received nasopharyngeal radium without improvement prior to treatment with Anatola.

(4) Treatment by intramuscular injection of vitamin A (Lobel's Formula) is an inexpensive

method which promises much for relief of this troublesome condition.

(5) No local or systemic reactions of any significance were observed in nine months of its use.

LARGE OVARIAN CYST: REPORT OF A CASE

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In reporting this case we wish to present one situation which is often encountered in the practice of medicine; that is, the differentiation between a large ovarian cyst and free fluid in the abdomen. Secondly, to our knowledge this is the largest cyst of undetermined origin which has been removed.

Faulkner and Douglas (1) state, "Almost every laboratory of surgical pathology has a kind of wastebasket of nomenclature into which are put many small obviously benign and harmless-looking ovarian cysts of undetermined origin. It is the duty of the surgical pathologist by study of appropriate and repeated sections to keep this group as small as possible. Undoubtedly most of them are of follicle origin or are the simpler varieties of serous cystoma." Likewise, they state that corpus luteum cysts may attain a considerable size though usually they are not more than 5 c.m. in diameter. The corpus luteum cyst is very commonly complicated by hemorrhage. The germinal inclusion cysts are usually small multiple cysts rarely attaining great size. In the case which we are about to consider, it must have had its origin in one of the above cysts. Likewise, Crossen and Crossen (2) mention the follicular, corpus luteum and germinal cysts or embryologic rest cysts as usually being small, but they do not give any size limit for the cyst.

Case Report

E. J. presented herself at our clinic on September 12, 1949, as a 22-year-old colored housewife with chief complaint on admission consisting of a greatly distended abdomen which was so large as to interfere with ambulation. Also, her abdomen was so large as to cause orthopnea. The history, as given by the patient, was rather erratic but according to her she was in perfect health until January, 1949, at which time she noted a tumor in the right side of her abdomen which was not painful. She had a normal menstrual period in January, which was her last menstruation. Her abdomen gradually increased

in size and she assumed that she was pregnant. She consulted her family doctor about five months after she first noticed her tumor and he was not sure at the time whether she had ascites or whether she had a large ovarian cyst. He observed her for a week and then did a paracentesis. According to the patient, about twelve quarts of pinkish fluid was drained from the abdomen. The fluid rapidly reformed and she had another paracentesis. Following the second paracentesis, she became acutely ill with cramp-like pains in the abdomen, high fever, nausea, and vomiting. She then was admitted to the Crossett Health Center.

Her past history was essentially irrelevant. She had had the usual childhood diseases but no nephritis, rheumatic fever, or scarlet fever. According to her husband, she had been an alcoholic for the past two or three years. Menarche occurred at fourteen years of age. Menstruation was always somewhat irregular. She had been married five years with no attempt at conception control. Her family history was uninforming. Her parents were living and well and her two siblings were living and well, with no history of any family diseases.

Physical examination on admission revealed a tremendously distended abdomen which lay upon the thighs when the patient was erect. There was a definite fluid wave in the abdomen. Pelvic examination revealed a small uterus to be anterior in position, but nothing more could be ascertained from examination of the pelvis except that the cervix appeared normal. There was no bulging in the cul de sac. Examination of the heart revealed a soft systolic pulmonic murmur, not transmitted, probably functional in origin. The blood pressure was 110/60. She had a typical male distribution of hair. The remainder of the physical examination, including rectal examination, failed to reveal any further pathology.

Laboratory examinations revealed a negative blood serology, and a low grade bladder infection to be present, with 10 to 12 pus cells per high power field and a trace of albumin. The urinary infection completely cleared on treatment in the hospital. She was anemic on admission, with a 64% hemoglobin and a 4,000,000 red blood count. A Fishberg urinary kidney function test showed some diminution of kidney function, the patient being able to concentrate to a specific gravity of only 1.010. A total blood protein was 9.9 grams % with an albumin of 4.76 grams % and a globulin of 5.14 grams %. There was a trace of urobilinogen in

the urine. The icterus index was 15, as compared to normal for our method of 4 to 8. The direct Van den Bergh reaction was .35 and the indirect Van den Bergh reaction was .45. The non protein nitrogen was 25.5 mg. %. The creatinine was .55 mg. %. The alkaline phosphatase was 4.2 units.

X-ray studies (3) revealed an outline of a mass in the abdomen. This apparently was within the abdominal cavity, the caecum showing some areas of compression. There were no signs of bowel obstruction noted. The bony structures were normal. Film of the chest revealed both lung fields to be clear. The heart was normal in size and contour. The length of the lung fields was apparently shortened due to increased intra-abdominal pressure. Lateral film of the skull revealed the sella turcica to be normal. There was no evidence of bone erosion. There was no evidence of fracture or other bone disease.

The patient was given multiple blood transfusions and was treated with various antibiotics, including penicillin, streptomycin, and aureomycin. While in the hospital from September 12, 1949 to October 21, 1949, her temperature ranged from 99° to 107°. On October 21, 1949 an exploratory laparotomy was performed by making a small right rectus incision. On opening the abdomen, a large mass was found to arise from the pelvis and was encased in a rather firm capsule. This cystic mass was adherent to practically every structure in the abdomen. The adhesions, however, were not very firm and were freed readily by blunt dissection with the gloved hand. The entire inferior surface of the liver was adhered to the cyst. Likewise, the spleen was adhered to the cyst. The incision was extended from the xiphoid process to the symphysis pubis and the cyst was delivered intact. It was found to arise from the right infundibulo pelvic ligament. The cyst was easily removed by clamping and cutting the infundibulo pelvic ligament, thereby performing a right salpingo-oophorectomy. There was considerable oozing from the raw surfaces where the adhesions were freed. No attempt was made to control this oozing. The abdomen was closed in layers, using chromic sutures with stay sutures of stainless steel No. 32 wire. The patient went into shock as the cyst was removed. 1,000 c.c. of whole blood

and 500 c.c. of plasma was given during the operative procedure.

The patient's temperature dropped to normal immediately after the operation and remained there until her release from the hospital on the ninth post-operative day. Prior to the surgery her temperature had never been normal or less than 100° for more than four hours.

The pathologist (4) reported the gross specimen to consist of a cystic structure weighing 26 pounds. The outer surface was grey-pink and everywhere intact. The cyst was filled with a dark red-brown fluid which was sort of ragged and adherent to the lining in most places. There were false septa of dense grey-white tissue, but there was no true loculation. The lining was smooth and everywhere intact. The wall was somewhat thickened. Microscopic examination revealed a cyst wall composed of dense hyalinized tissue and showing a chronic inflammatory lining composed of old blood pigment, histiocytes, plasma cells, lymphocytes, a few polys, and fibrin. Pathological diagnosis was a large cyst, the exact origin of which could not be determined, showing evidence of old inflammation and hemorrhage in the wall. This cyst may have originated from the ovary or from the para-ovarian tissue. There was no evidence of malignancy.

The patient has been seen postoperatively to present date of January 10, 1950 and has been doing satisfactorily and is entirely asymptomatic.

Summaries and Conclusions

1. A case of a large cyst of undetermined origin has been presented, the cyst weighing 26 pounds.
2. The differential diagnosis between free fluid in the abdomen and cystic masses is ever present. A small exploratory incision in the abdomen is a much safer procedure than paracentesis and will greatly lessen morbidity and mortality.
3. Apparently from this case we must consider that cysts of the ovary, other than serous and pseudomucinous cysts, can attain greater size.

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TRANSLUMBAR AORTOGRAPHY: ITS VALUE IN DIAGNOSIS, MANAGEMENT AND PROGNOSIS OF RENAL PATHOLOGY*

WATTERSON REAGAN, M.D.
Little Rock

Translumbar aortography is a radiographic procedure in which a radiopaque media of sodium iodide, Neo-lopax or Diodrast in a 70% solution, is injected into the abdominal aorta above the renal arteries and usually above the coeliac artery. This usually demonstrates the major arteries to the abdominal viscera. The renal arteries are easily demonstrable and are the subject of our discussion today.

Time will permit but a brief description of our technique but it is important to remember that attention to detail must be carried out to insure safety of the patient and proper interpretation of the films obtained.

The patient is placed on the X-ray table face downward. A preliminary flat plate P-A view is taken. The patient is prepared for sterile technique.

Under pentothal anaesthesia the selection site of the needle is made just beneath the 12th rib, 3 to 4 finger breadths from midline on the left side. An 18 gauge stainless steel needle six and one-half inches in length is directed anteriorly, medially and superiorly. The tilt of the needle in all directions is around 45 degrees. This varies slightly with the size of the patient. The superior and medial angle should never be more than sixty-five degrees.

The ventral portion of the left side of the vertebral column is hit around the 12th thoracic vertebra. The needle is withdrawn slightly and gently pushed forward into the aorta, the sensa-

tion being similar to puncturing the dura as in a spinal tap. Fifteen cc. of radiopaque solution is injected with a hand syringe connected to the aortogram needle by forty inches of small caliber high pressure rubber tubing with an outer circumference of $\frac{5}{8}$ inches taking two to three seconds for injection. The first film is taken as the last two cc. are injected and the second film, termed a nephrogram (to be discussed later), is taken as soon as the cassette is changed. The procedure usually takes less than five minutes from the time of needle insertion until the patient is returning to his room.

Contraindications to aortography are poor liver, cardiac and renal reserve, hemorrhagic tendencies and sensitivity to iodides. Caution should be used in patients with tuberculosis and hyperthyroidism. Intravenous and retrograde pyelograms should be done before aortography is considered.

The conditions that aortography may give an advantage in diagnosis, management and prognosis of renal diseases are classified as follows:

I. Anatomical malformations

- A. Renal agenesis
- B. Renal hypoplasia
- C. Renal ectopia
- D. Anomalies due to fusion
 1. Horseshoe kidneys
 2. Unilateral fused kidney, crossed renal ectopic
- E. Duplication of kidney
- F. Aberrant and polar vessels
- G. Polycystic diseases of the kidneys

II. Obstruction of the urinary tract

- A. Hydronephrosis
- B. Renal calculi
- C. Pyonephrosis

III. Diseases of the interstitial tissue

- A. Pyelonephritis—with obstruction
- B. Pyelonephritis—without obstruction

IV. Tumors

- A. Malignant neoplasms
 1. Adenocarcinoma
 2. Hypernephroma
 3. Hypernephroid and metanephroid tumors
(The term hypernephroma should be discarded.)
- B. Benign adenoma
- C. Lipomatosis
- D. Cysts
 1. Solitary cysts (accompanied by multiple smaller cysts) older age group thought to be due to arteriosclerotic disease.
 2. Para pelvic cysts
 3. Para renal cysts and tumors

* Read before Seventy-fourth Annual Session, Arkansas Medical Society, Fort Smith, April 19, 1950.

Glomerular, arterial, tubular and metabolic disorders (calcium and uric acid) are only mentioned to say that aortography is probably of no value in these diseases except in rare instances. Also careful evaluation of renal reserve would have to be made before performing the procedure in such diseases. We have one case demonstrating a renal artery thrombosis but the diagnosis may be made usually by routine work-up. So-called idiopathic hematurias are rarely explained after aortography by one of the above mentioned diseases.

In a series of forty-nine aortograms, the post-operative course has been without consequence. Careful preoperative evaluation of the patient and attention to detail will insure the safety of the procedure.

RESOLUTION

Dr. Charles C. Reed, son of the late Dr. Charles C. Reed, Sr., and Ruth Robinson Reed, was born January 24, 1908, and departed this life January 5, 1951. Between these two dates there was lived a life replete with activity and well directed efforts for the development of his own character and the benefit and welfare of his fellow citizens.

Dr. Reed was graduated from the Arkansas University School of Medicine in 1933 and practiced his profession in the City of Little Rock until his death, except for the period of his service in World War II. He was a Captain in the Medical Corps overseas, and served in the war zones and in the campaigns in Africa, Sicily and Italy.

Dr. Reed was a member of the Pulaski County, Arkansas State and American Medical Societies. He was a fellow of the American College of Surgeons and of the International College of Surgeons, and he specialized in the field of surgery.

He leaves surviving him his widow, Dorothy, one son, Charles C., Jr., and a daughter, Linda Lucille.

Dr. Charles C. Reed was a man who made friends easily and he kept them bound by the ties of friendship. He was liked and respected by the members of his profession, not only because of his fine ability as a surgeon, but also because of his qualities as a man and as a friend.

County Medical Society express to his family
Be It Resolved, Therefore, that the Pulaski

their heartfelt sympathy in their great loss and that a copy of this resolution be made a matter of record in the minutes of this meeting, and that a copy be sent to the family and to the Journal of the Arkansas Medical Society.

This resolution respectfully submitted to the members of the Pulaski County Medical Society by your committee.

PULASKI COUNTY MEDICAL SOCIETY,

H. A. Dishongh,
Daniel H. Autry,
W. Vernon Newman.

PIONEER DOCTORS OF UNION COUNTY

Compiled by
MRS. F. G. THIBAUT

Register of 1881 Union County

Perry E. Lewis.....	Mt. Holly
John V. Arrington.....	Caledonia
W. B. Johnson.....	El Dorado
J. B. Thompson.....	El Dorado
F. E. Morgan.....	El Dorado
G. Norsworthy.....	New London
O. P. Greenwood.....	El Dorado
Isham Kimball.....	Champagnolle
R. W. McHenry.....	Hillsboro
J. B. Perdue.....	Champagnolle
Wm. R. Pyle.....	Atlanta, Columbia Co.
G. T. Hale.....	Caledonia
E. R. Thompson.....	New London
C. A. Mason.....	Caledonia
A. E. McAlpine.....	Three Creeks

DR. OLIVER H. THOMPSON Union County

Marion, La., July 29, 1939.—Dr. Oliver H. Thompson, 82, veteran north Louisiana physician, died at his home here yesterday.

Member of a pioneer Union County, Arkansas, family, he was the son of the late Dr. and Mrs. E. R. Thompson of New London, where he was born and reared. His grandfather, the late Robert Black, was a member of the surveying party of three which selected and planned the townsite of El Dorado. He received his training at Vanderbilt University and had practiced medicine for approximately 55 years.

His wife, the former Miss Mollie Smith, died last December. Surviving are two sisters, Mrs. R. C. Nabors of El Dorado and Mrs. Allen Wellis

of Marion; four sons, K. S. Clayton Thompson, both of Marion, and O. M. and James Thompson, both of Baton Rouge; and a daughter, Mrs. Ike Webb of Sugarland, Texas. He was an uncle of Mrs. J. V. Spencer of El Dorado.

DR. K. G. McRAE

Union County

Hope, April 5, 1901.—Dr. K. G. McRae, 76 years of age, died this morning of pneumonia and heart disease. He was one of the most highly respected and honored citizens of Hope, a man of sterling worth and noble attributes of character, and an elder in the Presbyterian Church. His wife and six grown children survive him. He has many relatives over the State.

Dr. McRae formerly lived in Union County. He moved to Hope about ten years ago and amassed considerable property.

DR. J. M. HOLCOMBE

Union County

Pine Bluff, May 4, 1880.—Dr. J. M. Holcombe, widely known throughout the state as an eminent physician and most accomplished and estimable gentleman died this evening at twenty minutes to eight o'clock, of Bright's disease. The deceased has been suffering for some years with the affliction, and while his death creates no surprise, it awakens a profound sorrow throughout our community.

* Dr. James M. Holcombe of El Dorado, was appointed surgeon and ordered to Memphis. He marched overland to Gaines Landing on the Mississippi River and then by boat to Memphis, where he remained several days in camp on the levee. While there the building in which the quartermaster's stores were kept, caught fire and would have burned but for the prompt and efficient work of the regiment.

* This was taken from the History of Union County by Juanita Whitaker Green.

DR. SAMUEL TURNER

Union County

Dr. Samuel Turner, Captain, Sixth Regiment. He was either killed in battle or died in the field, Civil War. Regiments of Arkansas Infantry were distinguished on many battle fields, and campaigns, where trial and weary march showed devoted courage for their country's cause.

DR. W. W. SMITH

Union County

Dr. W. W. Smith, son of Joel Smith (moved

from Wilcox County, Alabama, in 1829, farmer), was one of the most respected doctors of the county and died at the age of 33 from an infection after treating a negro. His widow, Mrs. Lucy Gresham Smith, later married a Mr. Brown and after his death lived with her daughter, Mrs. Jim Prothro in El Dorado.

Dr. Smith bought his parents, Joel Smith, a cook stove in New Orleans, which was over 60 years ago. It was perhaps the first stove in the county. He brought his mother a 320-piece set of china just before he and Miss Lucy Gresham married and the family spent weeks preparing food on the stove to serve the "enfairs" dinner in the china for the bridal couple, Dr. and Mrs. Smith. The whole county was invited to eat the turkeys, chicken, goats, hogs, beeves, cakes and other foods that had been prepared. A wedding was to be enjoyed by all the community so all hard work was forgotten for a time.

DR. M. L. JAMISON

Union County

Dr. M. L. Jamison was a partner of Mr. M. A. McHenry for three years.

These letters are copied from:

FIRST REPORT OF THE STATE BOARD OF HEALTH TO HIS EXCELLENCY, THOS. J. CHURCHILL, GOVERNOR OF THE STATE OF ARK., FROM ITS ORGANIZATION, APRIL 27TH, 1881, TO DEC. 1ST, 1882.

SMALL POX IN UNION COUNTY

Hillsboro, Union County,
March 8th, 1882

Dr. J. A. Dibrell, Jr.,

Secretary State Board of Health,
Little Rock, Ark.

Dear Sir—Small-pox appeared in this place and vicinity on or about the 16th January ult., having been introduced by a vaccinated person who thinks he contracted the disease at Texarkana. It was of so mild a form at first that it was mistaken by the physician in charge for "chicken-pox", and a large number of people were exposed to the contagion before its true nature was suspected. Prompt measures were taken to isolate the families of those infected, vaccine virus ordered, the people advised of the use of disinfectants, and all proper precautionary measures were taken to prevent its spread. Unfortunately the "bovine virus" first received in "quills and points" proved worthless, and a new supply had to be ordered, doubtless many cases appeared that might have been prevented had the virus been good. This entailed delay, and

I think we now have the disease under control, as all have been vaccinated and no new cases have been developed outside of the families of those infected.

The great danger in future will be in the use of infected beds and bedding. Some of the families are too poor to destroy all. Disinfection may not have been thoroughly performed, and in such cases they will serve as a focus for a fresh epidemic. There ought to be a law to sequester and destroy all such articles, the same to be paid for either by the State or Counties.

I enclose herewith a full report of all persons attached to date. Professional engagements have prevented my making an earlier report, but I will try and send one weekly hereafter, as requested.

Yours respectfully, M. L. Jamison.

Hillsboro, Union County,
March 28, 1882.

Dr. J. A. Dibrell, Jr.,

Secretary State Board of Health.

Dear Sir—Your favor of the 15th to hand. Believing the epidemic of smallpox to be at an end I herewith submit a final report, which in connection with my previous report, will contain, I believe, all the essential data necessary to make up a correct history of the epidemic as it appeared here. It has not been wholly an unmitigated evil. We have no doubting Thomas now in our midst as to the protective influence of vaccination, and a law making it compulsory—and we ought to have one—would not be difficult of enforcement here.

Total number of cases, 44; number of deaths, 8. It will be seen that vaccination has fully maintained its reputation, for of the 38 vaccinated persons exposed only 12 had the disease. All were mild cases and all of them recovered. Of the 35 unvaccinated persons exposed 32 contracted the disease and 8 died.

I have included in the list of 73 exposed persons, only those who resided in infected houses. Three physicians attended the patients. All of them had been well vaccinated, and we had the occasional assistance in burying the dead and in nursing, of a few vaccinated persons not mentioned exposed, and none of them contracted the disease.

Respectfully submitted,

M. L. Jamison, M. D.

DR. M. A. McHENRY

Union County

Dr. M. A. McHenry was one of the most

successful practitioners of the "healing art," in Hillsboro, Arkansas, and his practice which extends over a wide territory, testifies abundantly to his ability. He has been a resident of the county from his birth, which occurred on February 1, 1855, and as the people of this locality have had every opportunity of judging of his character and capabilities, he was respected and esteemed wherever known.

He was the fourth of eleven children born to R. P. and M. C. (Williams) McHenry, the location of the McHenry's in this county dating from the settlement of Ft. McHenry, Maryland. R. P. McHenry was born in Alabama, and there lived until he reached his majority, but at that time took up his residence in Union County, Arkansas, where he was one of the very earliest settlers. Dr. McHenry remained on his father's farm until about twenty years of age, then began doing for himself as the war had left his parents comparatively poor. He then spent some time in teaching school and following the plow, and while following these callings, at odd moments he succeeded in obtaining a thorough and practical knowledge of the "world of books," and soon obtained enough means to enable him to finish his studies at the State University at Fayetteville, Arkansas. In 1882 he completed a course in the Medical Department of the University of Louisiana, after which he returned to Hillsboro, Arkansas, and began the practice of his profession at that place in partnership with Dr. M. L. Jamison, which connection was dissolved at the end of three years by mutual consent. He then followed his calling alone and met with excellent success.

In 1885, with a cousin, C. P. McHenry, bought out the mercantile interest of Dr. M. L. Jamison, and after that he had an interest in the firm known as C. P. McHenry and Co. These gentlemen were careful and methodical men of business. Dr. McHenry was exceptionally successful in the accumulation of worldly goods, and was now owner of about 1,240 acres of land, of which 175 were in a tillable state.

Dr. McHenry was married in 1884 to Miss Carrie W. Holbrook, a daughter of M. A. and L. M. Holbrook, and a lady of fine literary and musical attainments, of sterling worth and heiress of her uncle, Dr. Goldsmith's estate. To them were born four children.

The Doctor was a Democrat and although president of the Township and County Democratic Club, he did not take an active part in politics. He was a member of the Masonic fraternity since 1886, and from earliest boy-

hood had been a member of the Methodist Episcopal Church, South. He was always a public-spirited citizen, liberal in his contributions to worthy enterprises, kind hearted and was ever found ready to extend the right hand of fellowship to all with whom he came in contact.

DR. THOMAS M. PINSON
Union County

Dr. Thomas M. Pinson, of the firm of Pinson and Son, was born in Union County in 1858, fast extended his reputation as a physician, was very popular with the public. He was reared on the farm, and divided his time between assisting on the same, and in attending the public schools of El Dorado, in which he remained for about eight years. He then began the study of medicine, first in his father's office, and then attended lectures in Louisville. In 1880 he graduated at Little Rock; and at once commenced practicing with his father in El Dorado.

In 1885 he went to Texas, located at Cookville, and there practiced his profession until December, 1889, when he returned and re-engaged in the practice with his father.

He was married in 1881 to Miss Kate Newton, a daughter of Judge Issac Newton, of Camden, and to them were born three children: Anna Lee, John Hooper and Fannie Courtney. The family were members of the Baptist Church.

DR. JOHN H. PINSON
Union County

Dr. John H. Pinson, County Treasurer and the second oldest practitioner in Union County, Arkansas, was originally from South Carolina, where his birth occurred in 1831, and was the seventh of eight children born to Abijah and Sarah M. (Arnold) Pinson. The paternal grandfather was a soldier in the Revolutionary War, and the father was a soldier in the War of 1812.

Dr. Pinson was reared on the farm, and had but little educational advantages. In 1851 he began the study of medicine with a physician, and in 1853-54-55 he attended the medical lectures at Charleston, South Carolina, graduating from the Medical College of the State of South Carolina in the last named year. He then returned to Louisiana, where his mother was residing, his father having died in 1833, and he at once began practicing his profession. In 1858 he came to Arkansas, settled in the western part of Union County, and here he bought and entered a large tract of land. Then in connection with his medical practice he carried on farming, but soon gave up the latter and moved to

Lisbon, where he devoted all his energies to his profession. In 1866 he bought a farm in the eastern part of the county, tilled the soil there for two years and in 1873 moved to the town of El Dorado, where he practiced his profession.

He was very successful, and acquired a large and steadily increasing practice, while he gained the confidence of all as a clever and scientific practitioner. He was elected County Treasurer in 1874, and held this office many years, with but a short interval of a few months.

Dr. Pinson was married in 1857 to Miss Fannie A. E. Decker, a native of Mississippi, and they had four children: Thomas M. (who was associated with his father in his practice), Willie G. (married, and was in merchandising in El Dorado), Harriet E. (died in 1889 at the age of 27 years), and Annie L. (wife of J. S. Alphin, a merchant of El Dorado). The family were members of the Baptist Church, and were esteemed and respected by all acquainted with them.

Dr. Pinson was also very popular outside of his profession, was pleasant and courteous with all and was a gentleman of the old school. He was a leader in the promotion of the country's good, old practice, and a land-mark of the times. He was quite active in the politics of the county after the war, 1861-65.

DR. WILLIAM J. THURMAN
Union County

Dr. William J. Thurman, physician and surgeon, Lisbon, Arkansas. Dr. Thurman was one of the leading physicians of Union County, and was a physician of decided intelligence and ability.

He was born in Georgia, June 21, 1834, to the union of James C. and Ann M. (Adair) Thurman, natives of South Carolina and Georgia, respectively. The father was a mechanic by trade, but also carried on farming. In 1869 he emigrated from Georgia to Arkansas, settled at Lisbon, Union County, and resided there until his death. He was a minister in the Methodist Episcopal Church for about thirty years. There were fourteen children.

Dr. Thurman was educated in the private schools of Decatur, Georgia, and received his medical education at Legrand, Alabama. Subsequently he returned to Georgia, assisted in running machinery, and after coming to Arkansas, in 1860, he began practicing medicine, which he did successfully.

On July 7, 1861, he was married to Miss Margaret Taylor, a native of North Carolina, and in 1862 he enlisted in the Confederate

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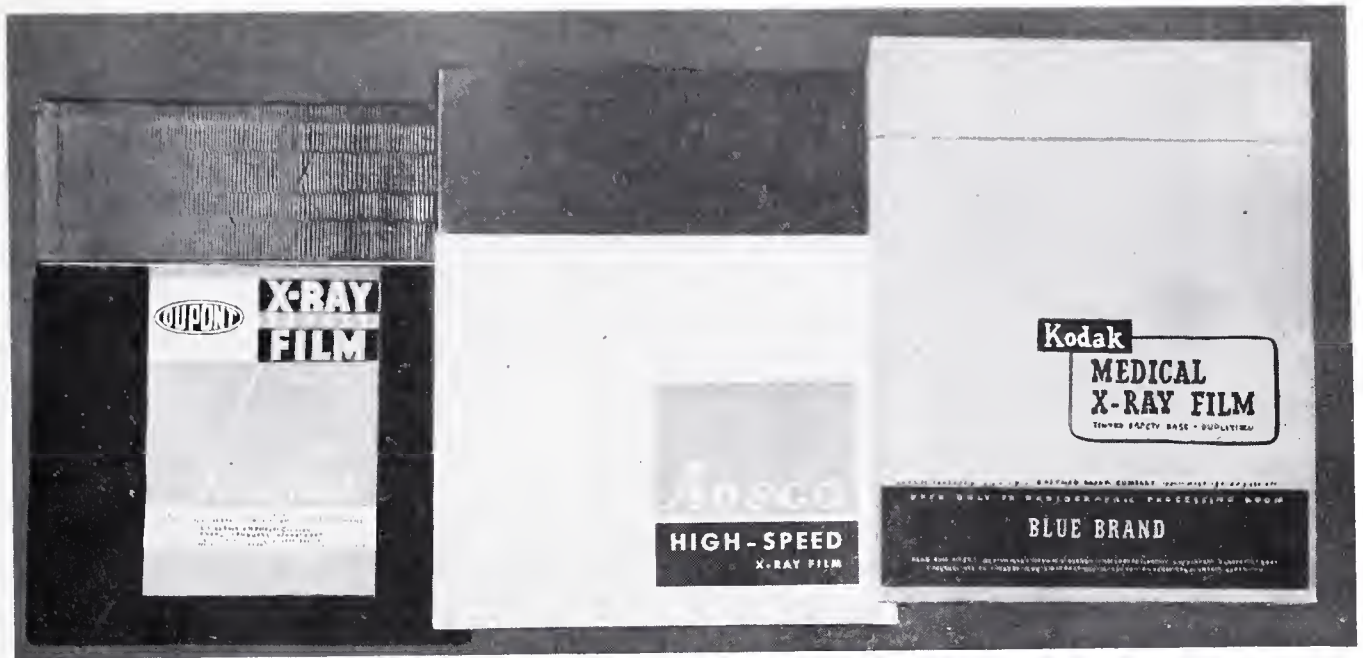
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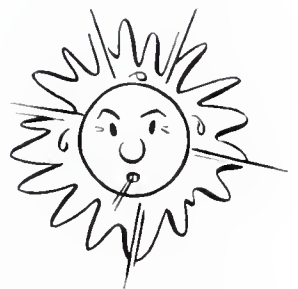
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Army, Company C, 24th Arkansas Regiment, under General Churchill, and his first battle was Arkansas Post. There he was captured and carried to Chicago, where he remained three months, being exchanged April 3, 1863. After this he was engaged in hospital work, until 1864, when he received a furlough and returned to Georgia. There he was captured again and carried to Bloomington, Indiana, where he remained until the surrender.

Returning to Arkansas, he began practicing again. He was a Mason, and a member of the Mt. Moriah Lodge No. 18, in which he held all the offices. He was school trustee for two years, also held the office of deputy sheriff for a short time, and was one of the progressive and esteemed citizens of the county.

Dr. and Mrs. Thurman were members of the Methodist Protestant Church.

DR. E. F. ROWLAND Union County

Dr. Eugene F. Rowland became a familiar friend in the homes of many in Union County, Arkansas, where he was gladly welcomed in his professional as well as social capacity.

He was born in Perry County, Alabama, May 18, 1843, was the son of Dr. James A. Rowland, and graduated in the class of 1877 from Charity Hospital Medical College, New Orleans, Louisiana, having taught in public schools to acquire means with which to complete his medical education. He then practiced his profession with his father.

He served in the late war, joining the Confederate Army in 1861, and was a private in Company G, Ninth Arkansas Regiment until the close of the war, participating in the following named conflicts: Belmont, Shiloh, the Mississippi Campaign, the Georgia Campaign, Franklin, and surrendered while under the command of General J. E. Johnston, at Greensboro, North Carolina.

He was married on November 10, 1869, to Miss Sallie, a daughter of Dr. Thomas Brandon, of Hempstead County, Arkansas. To their union eight children were born.

Dr. Rowland became exceptionally well known throughout this region in his professional capacity, and his success in the management of cases which others have regarded as almost hopeless was phenomenal. He supported Democratic principles, and socially was a member of the Masonic fraternity.

DR. JAMES A. ROWLAND Union County

Dr. James A. Rowland was an old and respected physician of Union County, Arkansas, who devoted the greater part of his life to healing the sick, and for his many kindly deeds received a portion of his reward in this world, for he had the confidence, respect and love of his fellowmen and the consciousness that he had driven sorrow and despair from many homes by his skill and talent as a physician.

He was born in Richland County, South Carolina, October 22, 1815, being the eldest of a family of seven children, born to the marriage of William Rowland and Jane Boyd, both of whom were born, reared and married in South Carolina, removing to Alabama in 1833, where the subject of this sketch was principally reared. They came to Arkansas about 1845 and resided for a short time in Union County. Dr. Rowland's only advantages for an education were received in the common schools of Alabama, but having formed the determination to make the profession of medicine his calling through life, he entered the Jefferson Medical College, of Philadelphia, Penn., which he attended one term, and in the summer of 1839 attended the Chapman Institute, and was graduated from the South Carolina Medical College of Charleston, South Carolina, in 1840, after which he began practicing in Greene County, Alabama. Here he remained until the spring of 1846, when he came to Union County, Arkansas, and his skill and talent were expended on the sick in this county after that time, his genial presence and encouraging talk aiding much in bringing about happy results.

He was married in 1842 to Miss Elizabeth M. Reynolds, who was the daughter of Caswell and S. N. Reynolds, who resided in Alabama, where Dr. Rowland met and married his wife. To them were born five children. Dr. John A. Rowland was the father of Dr. E. F. Rowland.

In connection with his practice Dr. Rowland devoted much of his time to farming, and was the owner of 1,600 acres of as fine land as there is in the county, besides being the proprietor of a mercantile establishment at Lapile. He was a Mason since 1846, and was a member of Lapile Lodge No. 294, and politically was a Democrat.

DR. JOHN M. McHENRY Union County

Dr. John M. McHenry was one of the foremost professional men of the county, and his merit and skill was acknowledged by all. He was

a practitioner in Union County, Arkansas, since 1871, and his skill and talent made him well known. He was born in Macon County, Alabama, September 4, 1841, being the eighth of eleven children born to R. W. and M. L. (Brown) McHenry, who were natives of Virginia and Alabama, respectively. In 1844 they emigrated to and settled in Union County, Arkansas, where the father, who was a physician, practiced his profession until his death. He was a member of the Masonic fraternity, and was agent for the Cherokee Indians, in Alabama, for three years.

Dr. John M. McHenry was reared in Union County, and after studying medicine with his father, entered college at New Orleans, in 1860, and took one course, afterwards taking one course at Richmond, Virginia, this being during the war, and in 1868 graduated from the Medical Department of Vanderbilt University, in Nashville, Tenn. In 1865 he commenced his practice in the State of Florida, then returned to his old home in Union County, Arkansas.

He was married, September 20, 1865, to Miss Georgia V. McNair, of Sumter County, Florida, and to them a family of eleven children were born: Thomas B. (who was married, in 1888, to Miss Lula Warrick), Martha L. (who was married, in 1887, to R. M. Deason, a farmer of this country), Parrie V., Lillian M., Blanche, Lionel L. (who died in 1889), Nic B., Robert S., William B. and Clinton E. Dr. McHenry was a member of the A. F. and A. M., which he joined in 1865, at Normansville, Florida, also held membership in Polk Lodge, in Union County, Arkansas. He was a Democrat, although not active, and in every respect was a public spirited man. He was fairly successful in the accumulation of worldly goods, and was the owner of 230 acres of land, 40 of which were under cultivation.

During the war he enlisted as a private in Co. A, First Arkansas Regiment, with which he served until the close of hostilities, being in the first battle of Manassas, Shiloh, Bragg's raid in Kentucky, Murfreesboro, Chickamauga, Johnston's campaign from Dalton to Atlanta, Jonesboro, Perryville, Franklin (in which battle he was captured and carried to Camp Douglas, Illinois, being released and paroled at the end of four months). He received a flesh wound in the side, at Atlanta, Georgia, but was not seriously injured.

DR. WILLIAM H. GOODWIN Union County

Dr. William H. Goodwin, physician and druggist, El Dorado, Arkansas. It is to the skill and

science of the druggist that suffering humanity looks for alleviation of pain. The physician may successfully diagnose, but it is the chemist who prepares the remedy. When, therefore, as in the case of the gentleman whose name forms the subject of this sketch, the two professions, namely, that of the physician, as well as that of the druggist, are combined, how doubly important becomes the establishment conducted by Dr. William H. Goodwin. This gentleman was born in Talbot County, Georgia, in 1844, and was the youngest of twelve children born to James C. and Nancy (Horn) Goodwin, the father a native of Georgia, and the mother of Florida. The father followed agricultural pursuits all his life, and, in 1845, emigrated to Arkansas and settled in Union County, seven miles west of El Dorado. He bought a farm of considerable size, cleared it, and made a good home. He was a rigid Methodist, and was an earnest worker in the church.

Dr. Goodwin received his primary education in the common schools, and in 1861 supplemented the same by entering the McKenzie College, in Clarksville, Texas, where he remained nearly two years. He then left the school, and entered the Confederate Army, in Co. A, Gould's regiment of cavalry, and served in Texas one year, part of the time as assistant commissary. In 1864 he served the appointment of assistant provost-marshal of El Dorado, Arkansas, and at once came to this place, where he assumed the duties of that office. In 1866 he commenced to read medicine with Samuel Turner, one of the prominent physicians of that time, and in 1866-67 he took a course of lectures at the New Orleans School of Medicine. He then returned home, practiced until the fall of 1869, and then entered the New Orleans University, where he graduated in 1870. He immediately returned, located near El Dorado, and resumed his practice, residing there until 1878, when he came to El Dorado. In 1879 he formed a partnership with T. C. Chew in a drug store, and was the only druggist in the place for some time, and as a consequence had an unusually large trade. In 1887 they started a dry goods store, which they conducted until 1890, when the firm divided, and Mr. Goodwin remained in the old "Marble Hall," a large store room.

He was married in 1882 to Miss Lena C. Chandler, a native of this town and state, and the daughter of William Chandler, who came to Arkansas at an early day, and settled in Union County, where he became prominent and a high-

ly respected citizen. To the marriage of Dr. and Mrs. Goodwin were born three children: Eva Verna, Roy and William Lynn. He was a member of the Masonic fraternity, El Dorado Lodge No. 13, and also a K. of H. He was a member of the Methodist Protestant Church. He owned two good farms six miles north and three miles east of the town, 800 acres in all, and all but 75 acres under cultivation was covered with timber. He had a good practice and was a progressive man.

THOMAS READ WILLIAMS

Union County

Thomas Read Williams received his M. D. from Transylvania University, Lexington, Kentucky, March 13, 1841, and came to Arkansas the same year. He brought his family and between one and two hundred slaves from their home in Tuscaloosa, Alabama. The following year his father and mother, Benjamin Cotherin and Patsy Pounds Cotherin, and his brothers and sister, Asenath, Margaret, Col. Horatio Gates Perry, Martha, Sunie and Henry Clay, joined him on their farm near Careyville. In 1842 Thomas Read Williams married Jane Underwood but she died the following year, and in 1847 he married Mary Jane Conner. Mary Jane was a niece of Robert Black, who surveyed El Dorado. Their children were Benjamin Cotherin II, Martha Jane, Charles Conner, Horatio Perry, Mary Thomas, Marcissa Asenath, Susan Ann Henry.

Dr. Thomas Read Williams died April 10, 1864, and his wife and daughter shortly after.

Dr. Williams served in the Arkansas legislature prior to the War.

ried to Miss Caroline Yemans. He then attended the Medical University of Louisiana, at New Orleans, and in 1846 emigrated to Arkansas. He settled in Union County, and was very active in the practice of his profession, becoming well and favorably known, not only in this, but in surrounding counties. To his marriage were born nine children, seven of whom lived to be grown: William Y., Ellen P. (deceased), Susan B., Joseph C. (killed during the war), Caroline, Charles M., Julia, Edward and Samuel H.

Dr. Chester was a man of decided intellectual ability. Time dealt quietly with him. He was public spirited, and took a decided interest in all laudable enterprises. He and his wife were members of the Presbyterian Church.

* "Dr. Chester—what he lacked of the technical training of present-day graduates of our medical schools was in a measure compensated by a rich endowment of common sense, a seemingly intuitive gift of diagnosis and a remarkable ingenuity in meeting emergencies with the medical and surgical facilities available in that remote region at that early day. On one occasion, having to amputate a patient's leg, he performed the operation successfully with a knife made of a long file hammered to a double edge by the blacksmith and sharpened on a grindstone. Physicians of that time did not seem to have had to deal with such a variety and multiplicity of germs as do those of the present day, and their simple pharmacopoeia of quinine, blue mass, opium, and castor oil and epsom salts sufficed for the relief of practically all the ailments with which they came in contact."

* This is taken from "Pioneer Days in Arkansas" by Dr. S. H. Chester, a son of Dr. Charles Chester.

DR. CHARLES CHESTER

Union County

Dr. Charles Chester, physician, Mt. Holly, Arkansas. This old, but very successful physician was born in Colchester, Conn., on August 21, 1810, and his parents, David and Prudence (Fox) Chester, were natives of the same state. There were seven children born to this union. The father was a planter by occupation.

Dr. Chester was educated at a public academy in Connecticut and remained in his native State until 1824, when he emigrated with his brother to the Palmetto State, locating in Sumter District. In 1832 he emigrated to Alabama, but a little later in the same year, he returned to South Carolina, and on January 13 was mar-

DR. PETER DAVIS

Union County

Dr. Peter Davis, one of the leading physicians and a prominent planter of Union County, owes his nativity to Georgia, where his birth occurred January 14, 1815. His parents, John and Elizabeth (Murphey) Davis, were natives of Georgia. Eight children were born to this union, all of whom grew to maturity. The father owned a very large farm in Alabama, and tilled the soil until 1840, when he emigrated to Arkansas, and located in Union County, where he resided until his death.

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COMMITTEES 1951-52

The major portion of the activities of the So-
ciety, the implementation of its policies, the
furtherance of its objectives, is accomplished by
hard-working committees and committeemen.
Selection of individuals to compose these com-
mittees is the difficult task of each president.
His is the responsibility to appoint individual
physicians who will diligently proceed with the
duties of special society assignments. Theirs is
the responsibility to carry on the good work of
the medical profession.

A partial list of committee assignments for the
ensuing year follows. A subsequent issue of The
Journal will carry the full roster.

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THE NATIONAL FUND FOR MEDICAL EDUCATION AND THE AMERICAN MEDICAL EDUCATION FOUNDATION.

The inauguration of the American Medical Association Education Foundation Fund by action of the Board of Trustees at the Cleveland session in December, 1950, has now proceeded to the establishment of the National Fund for Medical Education. The new organization is sponsored by outstanding leaders from the fields of public affairs, business, industry, agriculture, labor, higher education, the American Medical Association and the Association of American Medical Colleges.

The fund proposes to raise annually from voluntary sources substantial sums for the support of the medical schools of the United States. Expansion of the program does not lessen the need for the medical profession to continue its efforts through its own organization, the American Medical Education Foundation. On the contrary, the efforts of physicians should be intensified to meet the challenge which the public has given.

The medical profession should now make a concerted drive for a contribution to the 1951 fund sufficiently large so that all concerned may know that the medical profession does recognize and is willing to meet its responsibility in the campaign for voluntary support of medical colleges as opposed to governmental aid.

Arkansas physicians surely see the need for active support of medical education and it is hoped that they will make regular annual contributions to the fund. Contributions should be mailed to the American Medical Education Foundation, 535 North Dearborn Street, Chicago 10. Contributors may designate the school which they wish to benefit from their donations.

SCHAEFER BECOMES EXECUTIVE SECRETARY

The Council has selected Paul Charles Schaefer, a native of Saint Louis, as executive secretary of the Society to replace Sid Wrightsman. Mr. Schaefer is a graduate of the University of Missouri with the degree of bachelor of science in business administration and has an extensive experience with the Arkansas Missouri Power Company, in administrative appointments with the Fourth Army Headquarters, in private business and in sales managerial capacities. During World War II he served as a pilot in the air corps flying in the CBI theater. In civic

activities he has served as Boys Work Chairman for the Rotary Club, in various Boy Scout of America offices, holding the coveted EAGLE Scout award, as Master and junior councilor offices in the DeMolay organization and professes an interest in golf, hunting and fishing. Members of the committee and of the Council are impressed with his enthusiasm and predict that his services to the Society will be such that the organizational procedures developed by Mr. Wrightsman will be continued to further success.

The sixteenth annual assembly of the United States Chapter of the International College of Surgeons will be held in Chicago on September 10th through the 13th, 1951, with headquarters at the Palmer House.

An excellent program has been arranged. Prominent surgeons from the United States and other countries will participate. Scientific sessions will be held by all specialty sections of the United States Chapter.

The annual banquet will take place on Wednesday evening, September 12th. Mr. Lawrence Abel, F.R.C.S. (Eng.), of London, will be the principal speaker.

The assembly will conclude with the convocation, to be held in the Civic Opera House on the evening of September 13th. Senator Estes Kefauver will deliver an address on "The America of Tomorrow."

Hotel reservations may be arranged by writing to the Housing Division, Chicago Convention Bureau, 33 North LaSalle St., Chicago 2, Illinois.

RANDOM THOUGHTS OF THE SECRETARY

May 18. Driving Highway 59 with Goldstein and Hodges this afternoon, an excellent thoroughfare opening new vistas of scenic beauty in the Cookson Hills area to Siloam Springs' Memorial Hospital, an institution which can look Washington in the eye and tell it to go where, not one cent of Federal funds having been used in its erection, participating in an interesting diagnostic cancer clinic, Wilson, Huskins, Blauw, Jennings, being our colleagues.

May 29th. Pardon our blushes but the only contributions to the AMA Educational Fund from Arkansas are from radiologists.

May 30. On this day we might recommend that the deep freeze generals, the free riders, the influence peddlers, the five percenters, the tax and spend advocates, and all those who call this manner of men honorable, visit a National Cemetery.

June 3. Sitting with the committee for long hours interviewing prospective executive secretaries and realizing full well that personnel management is not our field. In the late afternoon riding with Wrightsman in pleasant rain homeward which affords him the opportunity to post-mortem, an acquisition of his since association with doctors. Finally to celebrate the wedding anniversary with Peggy cognizant of the many happinesses that have fallen to us.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE SIGNIFICANCE OF THE ISOLATED PULMONARY NODULE

The increasing use of chest roentgenograms has confronted physicians with a variety of unsuspected chest conditions including the isolated pulmonary nodule. This condition, variously designated as the "pulmonary coin lesion," the peripheral nodule, or dismissed as a "tuberculoma," presents diagnostic and therapeutic implications far out of proportion to the seemingly insignificant nodule itself.

During the past four years, a total of 96 such nodules in patients from 12 to 85 years of age have been studied. These nodules differed widely in appearance and were found in all segments of the lung. In size they varied from one to four centimeters in diameter, thereby excluding the large bronchiogenic carcinomas and the smaller calcified areas—the Ghon tubercles. They were round or ovoid in contour with edges smooth, fuzzy or irregular. The density varied from very soft infiltrates to extremely dense nodules. The presence of calcium deposits does not establish the benign or malignant nature of the process. Growth of a nodule has been noted in fibroma, hamartoma, adenoma and the granulomas, while lack of growth may occasionally be noted in carcinoma over many months. All nodules were entirely asymptomatic with two exceptions (bleeding from pulmonary cysts).

When confronted with a patient whose X-ray films reveal an isolated pulmonary nodule, careful studies should be instituted at once to attempt to determine the nature of the lesion. A careful history and complete physical examination should be supplemented by special diagnostic procedures as indicated. An exhaustive search must be made for primary tumors elsewhere and for underlying disease which might produce a local lung lesion. Laboratory studies may give a clue to the etiology of the nodule. Skin testing particularly for tuberculosis, histoplasmosis, blastomycosis, coccidioidomycosis and

echinococcus disease may help to establish a diagnosis in an obscure pulmonary infiltration. Our experience would indicate, however, that skin test reactions are of suggestive rather than absolute diagnostic value.

The relative frequency of tuberculosis and its tendency to produce nodular areas of disease on the lung must place it high on the list of suspected causes of such nodules. Sputum, if any, must be carefully studied for mycobacterium tuberculosis. In its absence, bronchial secretions or washings obtained bronchoscopically or gastric washings may be studied culturally or by guinea pig inoculation. However, the relatively high incidence of malignancy in this series (27.3 per cent) and the usual rapid growth of bronchial malignancy makes one seriously doubt the wisdom of delaying action for laboratory reports. Failure to recover organisms from secretions does not rule out tuberculosis. Malignant cells in bronchial secretions of patients with isolated pulmonary nodules are found but rarely.

The most valuable X-ray study may lie in a comparison of the recent with older films if available. Evidence of growth of the lesion is an indication for its prompt removal. Recommending another film in three to six months could seal the patient's doom in the presence of malignancy. From the experience gained by these studies, we have concluded that the only reliable and accurate diagnostic procedure is exploratory thoracotomy with excision and prompt pathological examination of the mass.

From the 96 nodules studied, 55 have been definitely proven by surgical operation (49) or by medical means (six). The positive bronchoscopic biopsy of malignancy or the progression of the lesion to fatal termination, the recovery of tubercle bacilli or the demonstration of a proven primary tumor elsewhere has been accepted as final medical proof. Fifteen (27.3 per cent) of the 55 proven nodules were malignant. Eleven were due to primary bronchiogenic car-

cinoma, one to a primary lymphosarcoma in the periphery of the lung and three to solitary metastatic nodules from carcinoma of the breast, colon and testicle. Eighteen (32.7 per cent) were found to be benign tumors.

The microscopic picture of most granulomas of varying etiology is similar and the only positive proof of the tuberculous or other etiology of such lesions is the demonstration of the specific organism. The number of proven tuberculous granulomas (six of 22) is small for this reason. Five others are listed as suggestive of tuberculosis because of the clinical findings and microscopic picture. Perhaps the pre-operative administration of streptomycin may have been a factor in negative cultures reported in this group. To date, our attempts to isolate other organisms from a group of these nodules have been disappointing, hence, the 10 nodules of undetermined etiology. The fact that some of these nodules unquestionably represent mature and burned out lesions must also be considered. The 41 undiagnosed nodules listed represent a group of patients who either have not completed their workup or have refused exploratory thoracotomy as recommended to the physician.

With the surgically treated patients, the usual procedure has been, at open thoracotomy, to excise the local nodule by means of a wedge resection and suturing the lung behind clamps while the pathologist is making his examination of the excised nodule. The procedure has been extended to segmental resection, to lobectomy or even to pneumonectomy as conditions and the pathologist's findings warrant.

This experience and the reports of others have convinced us that an accurate pre-operative diagnosis of the nature of an isolated pulmonary nodule is impossible in the vast majority of instances. Exploratory thoracotomy and immediate pathological examination provide the only accurate means of determining the exact nature of the lesion. The low calculated risk of such a procedure and the relatively high incidence of malignancy (27.3 per cent) make it the only safe and logical method of treating the isolated pulmonary nodule.

THE OTHER FELLOW HAS A RACKET

The hackneyed adage, "The grass is always greener in the next field," is truer than somewhat in the field of medicine. The internist is certain that he has a monopoly on the headaches and problems, whereas the surgeon is very likely to regard the medical man merely as a middleman whose life may be boring but presents no real worries.

How often, after a particular difficult operation, has a surgeon wished loudly and for the moment sincerely, that he had become an ophthalmologist or a dermatologist?

The oculist probably wishes he had taken up otorhinolaryngology when he has the first anterior chamber hemorrhage after an apparently uneventful cataract extraction. A sympathetic ophthalmia in a patient who has no vision in the other eye does not exactly promote restful nights for the eye man.

It is true that the dermatologist may not have any emergency calls, but he must feel like screaming when the patient returns for the ninetytieth time with the blotchy face a little blotchier and all his ointment exhausted. The treatment of psoriasis does not tend to add years to a man's life. Penicillin makes negative tests of positive ones so quickly that conventions of dermatologists are no longer necessary. Whether to use bismuth before mercury, vice versa or together with a pinch of iodides was formerly good for much discussion and a few papers a year. Now the poor fellow must stay home with the little woman and adolescent acne sufferers. Benadryl and its related drugs have just about done away with his one-armed bandit, the skin testing box.

Of course, it's all gravy and roses with the internist. He only has to climb four flights of stairs in the wee hours of the morning to diagnose a case for the surgeon who will operate in the morning. His office practice consists of joyful hours of listening to the numerous complaints of neurotic females. Between night calls he can gripe about his unhappy lot while the surgeon collects the fat fees and emerges the dramatic hero. In the meantime, however, the surgeon is fighting a postoperative ileus in the patient who has already decided to sue him.

Surely the ENT man has no worries. No?

Have you tried to cure a chronically draining ear or to stop a stubborn nose bleed? Have you the patience to treat the deaf? Place yourself in his place, in that singularly tragic position, of losing a young healthy tonsillectomy with anesthetic anaphylaxis. He can look forward to a few mastoid revisions; simple mastoidectomies, of course, went out with the advent of the sulfonamides, and anyone caught doing one is put in the same category as an abortionist.

The obstetrician and gynecologist certainly has the racket. He has financial security plus the deep appreciation and love of his patients. This is very true, but babies have the unfortunate habit of arriving at the most inopportune times. They aren't delivered on schedule except in Buffalo. But it's easy work, you say—ninety-nine out of a hundred deliveries are normal. 'Tis true, but that hundreth one can be an awful headache. An arrested transverse lie in labor has been known to add grey hairs to the youngest head. Bleeding late in pregnancy is guaranteed to cause diaphoresis even in the coldest weather. A pelvic repair is back-breaking labor, but occasionally coughs and sneezes have been known to bring disastrous results even after the use of fascia. A result about which the patient feels small gratitude. Pity the unfortunate gynecologist who attempts to cure low back pain with suspension of the uterus. The patient and back pain are likely to haunt him. Are you really looking for headaches? Get yourself a sterility problem to treat. If you can't locate one, you will have to be satisfied with a real dysmenorrhea case or even a glandular amenorrhea. You say the operative side is easy, gratifying and plentiful. Thromboembolic disease following simple pelvic operations occurs and even dicumerol has its worries. Season the above well with a little RH factor and you have the serene life of the ob-gyn man.

The pediatrician's life is a happy one. There are no grievances here. It is filled with pleasant routine of vaccinations, adjustment of formulae and weighing of babies. This is, however, broken too often with convulsions at three a. m., and sore throats which eventually become obscure, fatal neurological disease. To prevent monotony, of course, there are always developments and behavior problems which may last for years. Also, the pediatrician has a two for one deal. He must treat the mother as well as the baby. All this happy routine is carried on to the har-

mony of wailing children. Then, too, there are the numerous phone calls with such questions as "Something must be wrong with Johnnie, he loses his appetite right after eating. What shall I do? Do you think you better come right over?" This does much to develop the doctor's sense of humor.

The radiologist certainly has the perfect set-up. His hours are regular. His work is clean and pleasant and he has no emergencies. He only has to see the far advanced cancers and give them a little different encouragement each time they come for treatment. He has to take the blame for not diagnosing a lesion which was not diagnosable at time of roentgenologic survey. He is blamed for not curing a lesion where the surgeon has already failed. Every day he is called upon to give an exact, quick diagnosis of patients in whom careful histories and physicals were not done. He is called on to depress or stimulate, but if there are any side effects of radiation, he and his modality are condemned and cursed.

The problems of the surgeon and urologist are too well known to need enlargement, but some physicians in other fields still think the anesthesiologist has the perfect racket. He is alleged to have regular hours; no responsibility nor expenses and easy work. If, however, more than two minutes are taken for induction there ensue long recollections from the surgeon of how he used to put them to sleep with nothing but an ether cap. The patient is always said to be pushing by the surgeon, but to be in deep fourth plane by the anesthetist. The blood is invariably dark at the operative site but bright red at the head of the table. The anesthetist is not known as a vital factor by the patient and his bill is often not paid. All cases of postoperative atelectasis, ileus, headache, dilations, aspirations, and phlebitis are, of course, blamed on the anesthetist. All other postoperative complications are usually rationalized to be the fault of the anesthetist. The anesthetist holds a position somewhat similar to the dietitian in the hospital set-up. They are blamed for all evils.

Yes, we are all sure the other fellow has the racket, any yet none of us would give up his own particular line of work. As for myself, I feel certain that if you can't cut it you can't cure it.—Bulletin Medical Society of the County of Kings (N. Y.)

PERSONALS AND NEWS ITEMS

Joe F. Shuffield, Little Rock, has been appointed a member of the State Game and Fish Commission.

W. J. Ketz has been elected chairman of the board of stewards of the Batesville Methodist church.

"Carcinoma of the Cervix in Pregnancy" by Willis E. Brown and George C. Jernigan, Little Rock, appeared in the May issue of *The American Surgeon*.

I. Meschan recently addressed the Little Rock Kiwanis Club on isotopes in medicine.

"Hypothyroidism in Childhood" by W. A. Reilly, Little Rock, appeared in *The Journal of the American Medical Association*, May 19th.

Fred Hames, Pine Bluff, recently conducted a diagnostic cancer clinic at Warren.

The following have been elected directors of the Piggott Hospital Association: J. E. McGuire, W. E. Turner and W. E. Turner, Jr.

Jabez Jackson has been elected a director of the Newport Rotary club.

R. B. Robins, Camden, has been appointed a member of the advisory committee to the National Doctors' Committee for Improved Federal Medical Services, as a representative of general practice.

Harlan Hill, Little Rock, and Louis Hyatt, Monticello, have been elected president and secretary of the Medical Alumni Association of Arkansas A and M. College.

PROCEEDINGS OF SOCIETIES

The Association of Tumor Clinic Staff Members in Arkansas met jointly with the Fourth Councilor District Medical Society in Pine Bluff May 31st. Speakers were: Robert J. Reeves, Durham, North Carolina, and James H. Growdon, Little Rock.

The First Councilor District Medical Society met at Tyronza May 24th with the following appearing on the program: W. H. Moreland, Tyronza; W. H. Anderson, Booneville, Mississippi;

Mr. C. P. Loran, Birmingham; John Archer, Greenville, Mississippi; Jere Cook, Jackson, Tennessee; Chas. R. Henry, Little Rock; Karl J. Karnaky, Houston; J. J. Monfort, Batesville; R. L. Sanders, Memphis; Governor Sid McMath; Dean Nicholson, University of Arkansas School of Medicine, and Louis Krause, Baltimore.

BOOK REVIEW

Diabetes Mellitus—Principles and Treatment: By Garfield G. Duncan, M. D., Clinical Professor of Medicine, Jefferson Medical College; Director of Medical Division, Pennsylvania Hospital and the Benjamin Franklin Clinic, Philadelphia. 289 pages with 31 figures and 40 tables. Philadelphia and London: W. B. Saunders Company, 1951. Price \$5.75.

Dr. Duncan has presented a brief and concise story of diabetes mellitus from its discovery, through the pre-insulin era and the insulin era to the present with experiences in the use of the newest insulins being included. His discussion of present concepts of normal and abnormal metabolism, physiology, and pathology in diabetes is clear and to the point. The treatment of diabetes mellitus, including diet and the various insulins, and the recognition and treatment of diabetic complications is put forth in a methodical and easily understood manner. This book is recommended as a ready reference book on diabetes, as written by a recognized authority on the subject.

The Microkaryocytes, the Fourth Corpuscles and Their Functions, by K. G. Khorozian, A.B., M.S., M.D., Pineville, W. Va. Meador Publishing Company, 324 Newbury St., Boston 15, Mass. 1951. \$12.00 p. p.

Careful reading of this book leaves the mind very confused as to precisely what the author's intent may be. However, if as is maintained the microkaryocytes are a new corpuscle, demonstration of their existence depends upon a very limited technique. Since the reviewer has not repeated the experimental work upon which the book is based he can take no issue as to the existence of such bodies. However, correlation of the findings with other medical facts is so vague it is not possible to be certain where such agents, if they do exist, fit into the general body economy. The photomicrographs are not sufficiently clear to be of value in either sustaining or condemning the general thesis.

At the present stage of development of our knowledge about mammalian cells it seems very likely that there will be many new discoveries made concerning not only structures within the cell but intercellular and other tissue-cell relationships as well. Whether or not the structures proposed by the author of this work are valid is for future research to decide.

Current Therapy 1951 — Latest Approved Methods of Treatment for the Practicing Physician. Editor: Howard F. Conn, M. D. Consulting Editors: M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, Robert H. Williams. 699 pages. Philadelphia and London: W. B. Saunders Company, 1951. Price \$10.00.

The third edition of this popular book has been expanded but it remains a valuable reference work of gen-



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RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

erally accepted modes of therapy for a wide variety of diseases.

Textbook of Endocrinology: Edited by Robert H. Williams, M. D., Executive Officer and Professor of Medicine, University of Washington Medical School, Seattle. With the collaboration of: Peter H. Forsham, Harry B. Friedgood, John Eager Howard, Edwin J. Kepler, William Locke, L. Harry Newburg, Edward C. Reifstein, Jr., William W. Scott, George Van S. Smith, George W. Thorn, Lawson Wilkins. 793 pages with 168 figures. Philadelphia and London: W. B. Saunders Company, 1950. Price \$10.00.

This volume is an advanced text presenting recent advances in diagnosis and treatment of the so-called endocrine problems and represents the collaboration of eleven specialists in the field.

An Atlas of Human Anatomy: By Barry J. Anson, Ph.D., Professor of Anatomy, Northwestern University Medical School. 518 pages. Philadelphia and London: W. B. Saunders Company, 1950. Price \$11.50.

This is an unusual volume with illustrations employed in greatest number; text is at a minimum. It will serve both the medical student and the practicing physician but will prove of more value to the mature practitioner.

Bronchoesophagology: By Chevalier Jackson, M.D., Sc.D., LL.D., F.A.C.S., Honorary Professor of Bronchoesophagology and Laryngeal Surgery, Temple University, Philadelphia; and Chevalier L. Jackson, M.D., M.Sc., F.A.C.S., Professor of Bronchoesophagology and Laryngeal Surgery, Temple University, Philadelphia. 366 pages with 260 figures. Philadelphia and London: W. B. Saunders Company, 1950. Price \$12.50.

This is a complete discussion of the subject by the recognized authority which will be of interest not only to the bronchoscopist but to the surgeon and internist as well.

Functional Anatomy of the Limbs and Back—A Text for Students of Physical Therapy and Others Interested in the Locomotor Apparatus: By W. Henry Hollingshead, A.B., M.S., Ph.D., Head of the Section on Anatomy, Mayo Clinic, Rochester; Professor of Anatomy, Mayo Foundation, University of Minnesota. 341 pages with 122 figures. Philadelphia and London: W. B. Saunders Company, 1951. Price \$6.00.

This text is for the student, apparently written for those embarking in the field of physiotherapy, but its discussion of function and its morphologic basis will prove of interest to medical and nursing students as well.

Merck Manual of Diagnosis and Therapy. 8th Edition. Rahway, New Jersey: Merck and Company, 1950. Pp. 1592. Price \$5.00.

This is a reliable text which has been consulted for over fifty years by practitioners. Specific diseases with diagnostic and treatment pointers are covered in the major portion of the book while useful tables and miscellaneous procedure suggestions complete the volume. Some idea of its comprehensiveness may be obtained from the fact that it contains over 1,000 prescriptions arranged according to their therapeutic indication.

Pioneer Doctor. By Lewis J. Moorman, M.D., Editor, The Journal of the Oklahoma State Medical Association. Price \$3.75. Pp. 252 with illustrations. Norman, Oklahoma: University of Oklahoma Press, 1951.

With lucid and entertaining style the author recounts the experiences of a country doctor and of the growth of the State of Oklahoma; of his struggles to become versed in the disease tuberculosis; a record which will warm the heart of many an older practitioner who has a community of interest in the incidents of a general practitioner's life; a book which will serve to acquaint the

younger physician with the art of medicine and of its glorious background.

The Mask of Sanity. By Harvey Cleckley, M.D., Professor of Psychiatry and Neurology, University of Georgia School of Medicine. Pp. 569. Price \$6.50. Saint Louis: C. V. Mosby Company, 1950.

With many case presentations the author describes the varying forms of personality deviation and formulates his own theory on the psychopathic personality.

WOMAN'S AUXILIARY NEWS

The Auxiliary to the Sebastian County Medical Society met at the Ruth Moss Carroll Home, Fort Smith, on May 14th for installation of the following 1951-52 officers: President, Mrs. E. C. Moulton, Jr.; Vice-President, Mrs. W. L. Shippey; Secretary, Mrs. Marlin B. Hoge and Treasurer, Mrs. S. Wright Hawkins, all of Fort Smith.

Mrs. E. C. Moulton, Jr., President, gave a report on proceedings at the 26th annual Auxiliary convention in Little Rock during April and announced that the Auxiliary to the Sebastian County Medical Society had received a certificate of superior rating on statistical reporting for the year just ended.

Following the business session Miss Ethelle Reeves, President of the Fort Smith District Nurses Association, spoke on "Nurse Recruiting and Its Relation to Local Needs."

Hostesses for the luncheon were Mrs. W. E. Knight and Mrs. E. Z. Hornberger, Jr., both of Fort Smith.

Mrs. W. L. Shippey,
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No. 3

DIAGNOSTIC CRITERIA IN ARTERIO-SCLEROTIC HEART DISEASE*

O. L. HANSON, M. D.

and

BENJAMIN B. WELLS, M. D., Ph.D.**

What is **arteriosclerotic heart disease**? An indiscriminate use of the term has produced much confusion in the literature. As a diagnosis it is more often a refuge than a decision. The age of the patient and the presence of disease in some part of the arterial system which is accessible to ordinary examination are often the only criteria. Dr. Samuel Levine (1) and other cardiologists have emphasized the fact that sclerosis of the peripheral arteries does not cause heart disease. Careful studies have shown that even an extreme degree of peripheral arteriosclerosis may have no appreciable effect on the efficiency of the heart. Sclerosis of the aorta and large arteries is a frequent cause of systolic hypertension in the aged, but it has been shown that the life expectancy of individuals with only a systolic hypertension is of the same order as for those with normal blood pressure (2). In order to avoid confusion it is advisable to discontinue use of the term arteriosclerotic heart disease in favor of the more precise diagnosis—**coronary artery disease**. The latter terminology gives due recognition to the important fact that there is no constant correlation between sclerosis of the peripheral arteries (3), or even sclerosis of the aorta, and disease of the coronary arteries. Also, it emphasizes the necessity for diagnostic criteria of more specific nature than those so often accepted under the older designation.

There is little agreement, and less knowledge, as to the etiology or pathogenesis of coronary artery disease. However, we may name a few clinical factors of general etiologic implication that aid in making the diagnosis:

Age: Although coronary artery disease occasionally is found in young children or during early

adult life, the great majority of cases occur in individuals past 40 years of age. The occurrence of this condition among young men has been well documented by Yater and his associates (4) who published an analysis of nearly 900 cases of coronary artery disease in American soldiers from 18 to 39 years old. Nevertheless, the incidence of coronary artery disease as recognized by either clinical or pathologic evidence increases with the age of the patient.

Sex: There is a marked difference in the incidence of the disease among men and women. In women under the age of 50, coronary disease is a rarity in the absence of hypertension, diabetes, or myxedema. After the age of 50 its occurrence increases rapidly in women, so that at 60 or 65 the sex differences is less than 2 to 1 in favor of the male.

Heredity: Heredity plays an important part in the occurrence of coronary disease, but the mechanism involved is obscure. There are some studies that indicate an associated familial defect in cholesterol metabolism (5). Schlesinger (6), who has approached this problem from the standpoint of arterial structure and function, found evidence that myocardial infarction is closely correlated with a certain anatomic configuration of the coronary circulation which may well be the determining inherited factor.

Race: Most studies indicate that coronary artery disease is less common in the negro. This racial difference may be correlated with the fact that coronary disease appears to be more frequent among individuals whose occupations are sedentary. There are important statistical surveys which deny any correlation between the type and character of occupation and the occurrence of fatal coronary disease (7).

Associated Diseases: Hypertension, diabetes mellitus, and hypothyroidism are the three diseases most commonly associated with clinically significant sclerosis of the coronary arteries. As has been said, women under 50 rarely have coronary artery disease in the absence of one of these conditions. It seems clear that hypertension, per se, is not the cause of coronary disease. Patients with severe hypertension often have anatomically normal coronary arteries. Although

* Read before the Seventy-fourth Annual Session, Arkansas Medical Society, Fort Smith, April 17, 1950.

** From The Department of Medicine, University of Arkansas School of Medicine, Little Rock, Arkansas.

hypertension is more frequent in women, coronary disease is more common in men. These, and other facts indicate that there is no immediate cause-and-effect relationship between the two conditions. A recent study of 679 cases of myocardial infarction (8) proven at autopsy found that 61 per cent of the patients had a previous record of diastolic hypertension. This figure is significant in view of the fact that the incidence of hypertension in a general population of the same age group is said to be about 40 per cent. It may be that hypertension accelerates the development of coronary artery disease without taking part directly in its causation.

Diabetes mellitus is frequently associated with coronary arteriosclerosis. In the presence of diabetes, the commonly observed sex difference is lost; as many female diabetics have coronary artery disease as do male diabetics (8). The incidence of this serious complication is directly related to the duration of the diabetes, less so to its severity or the effectiveness of medical control.

Intimal arteriosclerosis is by far the most common histopathologic description of coronary artery disease. The more important features are necrosis of collagen fibers, fraying of elastic tissue, hemorrhage, calcification, ulceration and thrombosis. There are at least three widely discussed theories concerning the pathogenesis of the original lesion in the intima. These are (9):

1) **A physico-chemical change in the collagen of the intima.** This concept is held by those who consider that arteriosclerosis is the result of stress and strain, one of the degenerative mechanisms of aging.

2) **Fat from the blood passes through the endothelium and is deposited in the subintimal tissues.** The chief proponents of this theory are those who believe that an abnormality of cholesterol metabolism is the fundamental cause of arteriosclerosis. As a variant of this theory it has been suggested that certain fatty substances accumulate on the endothelial lining of the vessel and thus disturb its nutrition. Recent studies (10) using the analytical ultracentrifuge have introduced the possibility that low-density macro-molecules containing cholesterol may be implicated in the production of experimental arteriosclerosis in the rabbit. Whether cholesterol carried in this physico-chemical form is related to the natural occurrence of arteriosclerosis in man is a problem not yet sufficiently explored. It is of much interest to note that only with the administration of thiouracil can arteriosclerosis be produced in the dog by feeding large amounts

of cholesterol. There are many other experimental and clinical observations which bear on this point, but they fail to support any general conclusion concerning the relation of cholesterol to arteriosclerosis.

3) **The primary lesion is a small hemorrhage in the intima.** According to this theory the area of arteriosclerosis is established at a site where a small amount of blood is liberated into the sub-intimal tissues. Fat is then said to be liberated during disintegration of the red cells. This concept is not widely accepted at present.

Whatever the pathogenesis, the final result of coronary artery disease is a reduced flow of blood to the heart muscle. Symptoms occur because there is a discrepancy between the supply of blood and the need of the myocardium for blood. Coronary arteries that are narrow or inflexible as the result of disease cannot adjust their function to a wide range of myocardial demand. We recognize this as a state of lowered coronary reserve, and we know that anything that further decreases the supply or increases the demand on this arterial system may produce symptoms or death. Some common conditions in which the effective coronary blood supply may be decreased are: anemia; anoxemia due to pulmonary disease or altitude; paroxysmal tachycardia which causes a very short diastole; aortic insufficiency with its low diastolic pressure; shock with peripheral circulatory collapse, and hypotension. Some common conditions which increase the demand for coronary flow are: exercise, fever, anemia, emotion, thyrotoxicosis, anoxia and acidosis. An appreciation of such physiologic factors is important in the diagnosis and management of coronary disease.

Anatomical studies (11) of the normal heart have shown that major branches of the coronary arteries have few anastomoses with a diameter of over 40 microns. In contrast, hearts in which there is significant narrowing of the coronary arteries show numerous and wide anastomotic channels. Development of these anastomoses is clearly related to coronary arteriosclerosis, since they are not present in hearts of older persons without coronary disease. These, and similar anatomical studies, have helped to explain the wide discrepancies so often found between the pathologic and clinical features of coronary disease, and they have forced a considerable revision in our notions of prognosis.

Coronary artery disease usually manifests itself in one of four clinical syndromes:

- 1) Angina pectoris.
- 2) Myocardial infarction.

- 3) Coronary insufficiency or coronary failure.
- 4) Congestive heart failure.

The diagnosis of angina pectoris is based entirely on the clinical history. Not much has been added since the classical description was given by William Heberden in 1768. Resimen points out that the five chief characteristics of angina pectoris can be remembered by the word S A V E S: S—sudden onset; A—anterior chest; V—vague discomfort; E—exertion; S—short duration. The onset is always sudden and the patient feels well between attacks. The distress is typically referred to the substernal area, infrequently to the region of the left nipple. In about 60 per cent of patients the pain exhibits some type of radiation. Most often the pain is referred down the inner aspect of the left arm, it may radiate down either arm, and not infrequently is reflected into the neck, lower jaw or face. The pain is difficult for the patient to describe. It is not knife-like, stabbing pain. Being visceral pain it is usually vague. Most often the pain is precipitated by exertion or emotion or exposure to cold, frequently by a combination of these. It is of short duration, lasting less than three minutes in 97 per cent of cases. Since the diagnosis must be based on the clinical history, the record should be taken with great care. Particular attention is to be paid to precipitating incidents. The pain commonly occurs on arising, or going out of doors, especially during cold weather; it is more frequent on walking up an incline than on climbing stairs; complaints often appear when the patient is coming back from the store after shopping; it is especially common after a large meal. Not infrequently severe attacks occur during or immediately after intercourse.

Considerable diagnostic value can also be attached to circumstances that bring relief of pain. In most instances the pain disappears soon after the patient stops all activity. Relief after administration of nitroglycerine is often dramatic. To determine the latter point the patient must be closely questioned, since his discomfort may often last only 20 or 30 seconds, and as much time as this is required for the full action of the nitroglycerine. It is well to remember that nitroglycerine may also relieve the pain of biliary colic.

The electrocardiogram and the anoxemia or exercise tolerance tests have not proven to be of much practical value in the diagnosis of angina pectoris. The value of the electrocardiogram itself is vitiated by the fact that approximately 50 per cent of patients with angina pectoris have

normal tracings. The anoxemia and exercise tolerance tests for coronary artery disease are intended to disclose objective evidence of diminished circulatory reserve by temporarily increasing the demand for blood flow in the myocardium. In the technic devised by Robert Levy the patient is required to breathe a mixture of 10 per cent oxygen and 90 per cent nitrogen for twenty minutes or less in case definite anginal pain or other unpleasant symptoms appear. Electrocardiograms are taken at intervals during the test. If evidence of myocardial anoxia appear in the tracings, the test is said to be positive. Of clinically obvious cases of angina pectoris (12), only about 55 per cent will have a positive test. In doubtful cases one may expect to get about 20 per cent positive results. It is clear, therefore, that a negative result does not rule out coronary artery disease. This is a serious defect, to say the least. The exercise test, such as the Master two-step technique, yield results which are no better than the Levy procedure. Since all tests in this category show a very low proportion of positive results, while a negative result is meaningless, plus the fact that the procedures are not entirely without danger, their general use cannot be recommended. They are of definite value in the field of cardiac research, and may occasionally be useful where objective evidence of coronary disease must be had for such special purposes as insurance eligibility, and armed services survey boards, etc. Angina pectoris may be confused with many other conditions, among which are cervical or dorsal arthritis, hiatus hernia, peptic ulcer, biliary colic, lobar pneumonia, etc. In most instances a careful history and complete physical examination will indicate the correct diagnosis.

We are all familiar with the typical clinical manifestations of acute myocardial infarction. The infarction may follow a period of unusual exertion or emotion, but it often occurs at rest. The pain is substernal as it is in angina pectoris, but it is usually much more severe and persists much longer, frequently for hours. As the pain continues the patient shows the typical signs of shock or peripheral circulatory collapse. He may be dyspneic and there may be fear of impending death. The heart tones are weak and muffled; a diastolic gallop is heard in about one-third of cases. A moderate fever and leukocytosis usually appears in about 24 hours, and the sedimentation rate is elevated after the third or fourth day. In many cases there is transient rise in serum bilirubin appearing after the third or fourth day,

and an increase in the urinary excretion of urobilinogen. These signs of myocardial infarction which appear during the first five days after the accident are often very helpful in establishing the diagnosis.

Myocardial infarctions do occur without pain or the pain may be minimal. These patients usually have some other symptoms which direct attention to the possibility of infarction, such as sudden dyspnea, nausea and vomiting, vertigo, collapse or syncope.

The electrocardiogram is of definite value in the diagnosis of myocardial infarction. When this condition is suspected it is important to take several precordial leads, since the possibility of missing an infarct with the standard leads and only one precordial lead is very real. It must be emphasized, however, that the electrocardiogram will not make the diagnosis of every infarct. If the electrocardiogram is normal, the clinical diagnosis should be carefully reviewed, but proper treatment should not be withheld in those cases where the electrocardiogram fails to confirm the clinical impression.

Coronary insufficiency or coronary failure has been described as a clinical syndrome between that of angina pectoris and acute myocardial infarction. The main differences in diagnostic criteria are these (13):

- (1) Duration of pain longer than that of angina pectoris and shorter than that of myocardial infarction.
- (2) Intensity of pain greater than that of angina pectoris and less than that of myocardial infarction.
- (3) Peripheral vascular collapse being absent in angina pectoris, unusual in coronary failure and frequent in acute myocardial infarction.
- (4) Evidence of necrosis, such as elevation of temperature, leukocytosis, and elevated sedimentation rate being absent in both angina pectoris and coronary failure and present in acute myocardial infarction. The electrocardiographic changes are transient in coronary failure, while in acute myocardial infarction they persist for weeks, going through the typical electrocardiographic evolution of infarction.

Congestive heart failure is the fourth clinical manifestation of coronary artery disease. One is always on rather uncertain ground when diagnosing coronary artery disease, in the absence of **cardiac pain**. It must be remembered that in the aged dyspnea on exertion, slight cyanosis, basal rales and a palpable liver edge are not

pathognomic signs of congestive failure (14). Pulmonary disease such as emphysema, pulmonary fibrosis, mild chronic bronchitis and atelectasis are much more often responsible for these symptoms and physical findings. Peripheral edema, particularly that occurring as an isolated finding is frequently due to nutritional deficiencies, varicose veins, intra-abdominal tumors, or obesity. However, in the presence of congestive heart failure and if no other cause of the heart disease is found, (hypertension, valvular disease, etc.) the diagnosis of coronary artery disease may be made. The symptoms of congestive heart failure in the presence of coronary artery disease are, of course, the usual ones of dyspnea, paroxysmal nocturnal dyspnea, cough, weakness, and edema.

It should be remembered that before symptoms of coronary artery disease are present, the changes in the coronary arteries are moderately to markedly advanced, that there are many aged people with some coronary arteriosclerosis with no symptoms, and that all aged people should be handled with due regard for the physiologic principle of supply and demand.

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A BRIEF SUMMARY OF THE MORE RECENT APPLICATIONS OF RADIO-ISOTOPES IN CLINICAL MEDICINE*

ISADORE MESCHAN, M. D.**

Introduction. The possibilities of atomic medicine are as unlimited as those of atomic warfare, and it is my purpose in this short monograph to review very briefly some of the more important recent advances in this connection as pertain to clinical medicine.

Definition of Atom and Isotope. In accordance with the Rutherford-Bohr model of the atom— for which, incidentally, Professor Bohr, a Danish physicist, was awarded the 1912 Nobel Prize—the atom looks very much like the solar system. At the center of this system is a massive, dense nucleus, corresponding to the sun in the solar system, and at relatively great distances away from this center are many very light particles which spin around in circular or elliptical orbits just as the earth and other planets revolve about the sun. The nucleus, or central mass, is composed of many closely-packed positive particles called "protons", and similar neutral particles called "neutrons." Ordinary hydrogen, for example, or hydrogen¹ contains only a single proton as its nucleus and a single electron in its orbit. Deuterium, or hydrogen² contains a neutron within its nucleus in addition to the proton; and tritium or hydrogen³ contains two neutrons in addition to the single proton. The single electron in the orbits remains the same; and hence we come to a definition of an isotope which would indicate that **isotopes are atoms having identical orbits or identical electrical charges, but different atomic nuclear structure.** Within the atomic nucleus they contain the same number of protons, but they differ with respect to the number of neutrons contained within the nucleus. The atomic mass or weight of an atom is determined by the sum of the protons and neutrons in its nucleus. The chemical properties of the atom are determined by the electrons in the outer orbits, or the atomic number of such electrons.

Practically every element as found in nature is a mixture of two or more isotopes with one predominating usually, but not always by far.

What is Radioactivity of an Element? Radioactivity is the emission of energy from the nucleus of an atom due to the unstable state of the atomic nucleus. That energy is in the form of

extremely short light rays which are similar to X-rays, called alpha, beta, and gamma rays. There is a constant tug-of-war between the energies contained within the nucleus by the protons repelling one another and the nuclear envelope largely due to surface tension like the cohesive force of a droplet of water. When the intra-nuclear energies become excessive the nucleus breaks or undergoes fission. The intra-nuclear energy may be excessive in the natural state of an element like those of all atoms beyond an atomic number 83. In that case the element is naturally radioactive, and as early as 1923 Hevesy utilized a radioisotope of lead in tracer experiments with plants. In 1934 the Curie-Joliot team, working together, discovered that they could produce artificial radioactivity by artificially introducing into the nucleus an excessive energy from outside in the form of an additional subatomic particle. That is, they were able to penetrate the nuclear envelope by an additional subatomic particle. There is, however, a tremendous barrier energy by the nucleus before its envelope can be penetrated, and hence the task of producing artificial radioactivity is a very difficult one. By 1935, however, there were 100 artificial radioisotopes. Now there are well over 700.

What are the Various Methods of Producing Radioisotopes Artificially? From the practical standpoint, there are only two sources of radioactive isotopes: 1) the cyclotron, and 2) the pile.

The cyclotron is primarily a device for speeding up charged particles and imparting to these charged particles (such as protons or deuterons) a tremendous energy. These charged particles are then made to bombard a window and if this window be made of beryllium, neutrons are produced in considerable quantity. However, this neutron stream is minimal compared to the neutron flux which can be obtained from the second method of making radioisotopes, namely, from the pile. The uranium pile is a tremendous quantity of Uranium 235, and Uranium 235 has the unusual property of splitting into various unequal portions due to the tremendous amount of moving energy contained within its nucleus. Every time it splits, it gives off more neutrons than are consumed in its splitting process. Thus, there are constantly produced an excess of neutrons and these extra neutrons may be utilized to bombard any element which is introduced into the pile.

In the uranium pile there are numerous graphite moderators which can be utilized to absorb excess neutrons and in that way the

* Presented before the Association of Tumor Clinic Staff Members in Arkansas on January 25, 1951.

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uranium pile can be kept under control. Any substance which we desire to irradiate within the uranium pile can be introduced through various openings, and it is thus placed inside this huge concrete container wherein it is bombarded by the tremendous number of neutrons which are liberated from the uranium fission. It is a happy fact that most of the biologically important radioisotopes such as carbon 14, phosphorus 32, iodine 131 and sulphur 35 can be produced by pile neutrons in large amounts. It must be remembered, however, that many radioisotopes cannot be made in the pile at all, or are made in the pile in only very small amounts. Examples of these latter are beryllium 7, fluorine 18, sodium 22, manganese 52, arsenic 74, and iron 55 and iron 59. Nevertheless, we are extremely fortunate that the uranium pile is capable of producing most of the isotopes which are important from the clinical standpoint in large quantities.

After the nuclear transformation has occurred by one method or the other the problem of separation of the radioisotope presents itself. This problem has to be dealt with by the nuclear chemist for each element separately, and is frequently very involved and difficult.

In the pile, in addition to the radioisotopes produced by nuclear bombardment, there are numerous fission-product elements from the fission or breakage of the uranium atom or plutonium atom proper. A total of some 160 such isotopes have been recognized, but since very few of these are produced in the atomic number range of 20 to 63, these do not have great practical value except in knowing of their existence from the standpoint of the atomic bomb.

The Meaning of the Half-Life of an Isotope.

The half-life of an isotope is the amount of time which is consumed in the deterioration of an isotope to 50% of its original amount. Thus, in plotting the decay curve of a given isotope from 100% to 50%, one half-life is consumed. In the further reduction by another 50% two half-lives are produced, and so on down the line. The disintegration scheme of every isotope follows a very definite pattern, and is never changing for a given isotope. Therefore, the half-life of every isotope is a constant feature of that isotope and cannot be altered by any known means.

How Do Radiations from Radioisotopes Make Themselves Useful in Medicine? There are two general methods of application; 1) in tracer studies, and 2) as radiation sources.

When we say that we are employing isotopes in tracer studies we imply that we are placing a radioactive atom in a given chemical compound and by means of the radioactivity of that atom we are able to trace the chemical compound throughout any of its actions and reactions. In the field of academic medicine the utilization of tracer methods has untold benefits. For example, it allows a very simple expedient for studying the permeability of cell membranes. One places a semi-permeable or permeable membrane on one side of a solution containing a radioisotope. The concentration of the isotope on that side is known prior to the onset of the experiment. After a given time interval the solution is analyzed for radioactivity on the other side of that permeable or semi-permeable membrane and the extent of passage of radioactive ions through that permeable membrane can be very accurately assayed. This type of experiment is characteristic of the many very important investigations that have been carried out with various radioisotopes in conjunction with the various membranes within the body.

As for using radioisotopes as radiation sources, their use is very similar in most respects to the well-known usage of radium. Of course, each isotope emits rays of different character and different energy levels and these must be well understood before they can be utilized therapeutically. Nevertheless, radioisotope usage for therapy is another form of radiotherapy, and such radiotherapy in the form of radium has indeed been well understood for over half a century.

Radioactive Iodine. All of us have heard a great deal about the utilization of iodine 131 for diagnosing and treating thyroid gland disorders. It is a relatively simple isotope to utilize and has great expediency since it has a relatively short half-life of 8 days. The patient drinks a known quantity of iodine 131 in a buffered water solution. For diagnosis a dosage of 15 to 100 microcuries is employed. For therapy, doses of anywhere from 1 to 100 millicuries are employed. To a great extent the iodine 131 is selectively absorbed in the thyroid gland, or if it be a cancer of the thyroid that has functioning thyroid tissue within it, it, too will absorb the iodine 131. To a great extent also the iodine is excreted in the urine and one can follow the pattern of iodine 131 in the urine. By means of a Geiger-Mueller counter or similar detector apparatus one can thereafter detect the radiations related to the iodine 131 from the thyroid gland or from tumor metastases which exist anywhere within the human body. One can obtain a very accu-

rate concept regarding the extent of the absorption of the iodine by this method.

Of course, this same method can be utilized to study thyroid gland physiology, and very many important observations have been made with regard to iodine metabolism and thyroid function by means of this method. Interestingly enough, the iodine concentrating capacity of the normal thyroid differs, depending upon the amount of carrier iodine that is present in the labeled iodine administered. Also of course, it will vary with the degree of previous iodine saturation that is present in the thyroid gland. For that reason it is our practice to be certain that the patient has not taken any iodine for a period of at least two weeks prior to any tracer studies of the thyroid gland. We know that practically all the iodine administered under these starved conditions is readily taken up by the thyroid gland and almost immediately converted into the organic compounds of thyroxine and the diiodotyrosine types. Now, if 0.1 of a microgram of iodine 131 be taken—in other words, practically no carrier of iodine along with this extremely small dosage of iodine—it has been found that normal and endemic goiter patients accumulated 20 to 25% of the radioiodine within 24 hours. In the same time the uptake by hyper- and hypothyroid patients with goiter ranged from 60 to 80% with more than half being taken up in the first 3 hours. In hypothyroid patients without goiter the radioiodine deposit ranged from 0.2 to 2.5%.

However, with larger doses of carrier iodine along with the labeled isotope the results are somewhat different. Thus, when 14 milligrams of labeled iodine is administered in normal and endemic goiter patients there is a maximum level of uptake reached in 48 hours with no perceptible loss during the next 3 days. The uptake averaged 3.5 to 10%. In hypothyroids without goiter it was less than 0.05%. In hyperthyroid patients the maximum accumulation averaging 40% was obtained in 3 hours and declined to 1/3 of its previous level in 12 hours. In hypothyroidism with goiter it is similar.

Another method in which radioiodine has been employed clinically is not only to determine the physiologic status of the thyroid gland and perhaps the detection of abnormal uptake of the iodine by thyroid, but also to determine by means of autoradiographic examination of the thyroid gland the exact mode of deposition of the iodine within the thyroid and the exact distribution of the radioiodine within the thyroid gland after it has been administered. This is

accomplished in the following manner: After the radioiodine has been administered a tissue section of the thyroid gland from the patient is obtained. This is placed upon a special slide which contains a photographic emulsion, and it is allowed to remain in contact with this slide for one day or more. It therefore causes a blackening of the emulsion. This slide is developed just like any ordinary film and thereafter stained by routine hematoxylin and eosin techniques. The exact distribution of these darkened flecks is thereafter determined within the cells and considerable benefit and information is thus obtained by knowing the exact distribution of the radioiodine within this tissue section.

There are still other methods whereby radioiodine has been employed clinically. For example, radioiodine when incorporated in diiodofluorescein may be utilized for detecting brain tumors with this radioactive dye. Diiodofluorescein labeled with iodine 131 is injected into the blood stream. There are certain brain tumors which selectively take up diiodofluorescein and this selective uptake can thereafter be determined by Geiger-Mueller tube studies over the patient's scalp. By means of such survey studies, excessive localization in a given area can be readily detected and thus a tumor may be found which cannot be detected by any other means.

Radioactive Phosphorus or P³². This has a half-life of 14.3 days and is therefore very useful in clinical medicine. In tracer techniques it has been found of some value for the localization of brain tumors. Like diiodofluorescein, when injected into the blood stream it seems to be taken up more selectively by brain tumors than by normal brain tissue. By virtue of its radioactivity its greater localization within a tumor can be detected by a special probe detector which can be placed within the brain. Unlike radioiodine, this probe detector must be placed directly within the brain since P³² emits only a beta ray with a very short range, whereas iodine 131 emits a penetrating gamma ray which can be detected through the skull.

Another tumor which has been localized to some extent by means of radiophosphorus has been the breast carcinoma. It has been found, for example, that radiophosphorus can be taken up by certain breast tumors. Twenty-five percent greater uptake has been recorded by carcinoma of the breast than by normal breast tissue. Here, too, however, one must realize that a special probe detector would have to be em-

ployed since the range of the beta rays from P^{32} is minimal.

Probably the greatest usefulness of radioactive phosphorus, however, has been in radiotherapy. It has been found to be the treatment of choice in cases of polycythemia vera. Doses as little as 8 millicuries delivered in a two-week period have been found to cause complete remission of the idiopathic type of polycythemia vera for periods of 5 years or more. Such similar remissions are virtually not obtained by any other mode of therapy. However, in this connection it must be stated that there is no point in treating a patient with radioactive phosphorus for polycythemia vera who can be controlled by other means such as bleeding techniques.

Radioactive phosphorus has also been used in the treatment of chronic leukemias and in lymphomas, but it is probable that it has very little advantage over ordinary X-ray therapy in its utility in that fashion. It is probable that there is perhaps a somewhat lesser incidence of radiation sickness than is obtained with ordinary X-ray therapy, but otherwise it has no greater value in this regard than X-ray therapy. It is very simply administered since it likewise can be administered orally in a water buffered solution. It is selectively absorbed by the entire reticulo-endothelial system and it causes a considerable depression of the bone marrow elements.

Radioactive Sodium. This is another radioisotope which has had widespread clinical usefulness. The most prevalently used radioisotope of sodium is Na^{24} which has a half-life of 14.8 hours. This isotope must therefore necessarily be used shortly after its production in the pile. It emits both beta and gamma rays. It has been used extensively for studying the sodium turnover in the body. Sodium chloride containing Na^{24} is injected into the body and samples of the blood, sweat, or body fluids or bone may be measured for Na^{24} content. It has been found for example, that sodium transfer through the blood vessel walls is fast to tissue fluid and to sweat. It is of rather medium order to fluid of the eye, the brain, and spinal cord; and it is extremely slow to the bones and the teeth. It has been found that radiopotassium is much more slowly absorbed than is radiosodium. Radiosodium is not absorbed to any great extent from the normal vagina, but it is absorbed considerably from the post-partum vagina, and thus one must guard against introducing into the post-partum vagina sodium chloride solutions in excess. It has been demonstrated that radio-

sodium is also absorbed through the intact skin.

Radiosodium has been used to determine the volume of extracellular fluid in normal human tissues.

Na^{24} has been utilized for diagnosis of the pumping qualities of the heart by a technique called **radiocardiography**. For example, Na^{24} is intravenously injected in the arm. A Geiger-Mueller counter placed over the heart records the passage of the radiosodium first to the right heart, then to the lungs, then to the left heart from the left lung. This is done by means of an inkwriting recorder which shows the route of the Na^{24} . Radiocardiography has given valuable information regarding the circulation through the heart.

Na^{24} has also been utilized for detecting the normal and restricted blood circulation in an extremity. Thus, Na^{24} may be injected in an arm vein or in the inguinal area. The blood carries the Na^{24} to both legs and the rate of equilibrium of sodium chloride with the leg tissue fluids is recorded by means of a Geiger-Mueller counter placed over the ankle or the foot. A high reading or rapid equilibrium indicates good circulation; a low reading indicates poor circulation. This method of study gives the pattern of blood flow in the extremities and permits an exact location of arterial constriction. This method is without discomfort to the patient.

Radioactive Carbon has been used very extensively in experimental techniques. For the most part its utilization is rather difficult and is somewhat more limited than the other isotopes about which we have written. It emits beta rays of very weak energy and of very long half-life. The half-lives of its beta rays range from 4700 to 6400 years. By virtue of this long half-life and also by virtue of its extremely weak beta ray its utilization is highly technical and somewhat limited. Nevertheless extremely valuable information has been obtained regarding the metabolism of proteins, carbohydrates, and lipids with its use. The course of labeled samples of biologically essential elements has been traced throughout the body. The absorption, the permeability of membranes to these elements, the storage of these elements, their distribution, the mode of formation, chemical transformation and paths of secretion of these various substances has been very extensively studied. These studies are far beyond our present presentation. Radioactive carbon has also been utilized for studying cancer-producing agents in carcinogenesis. Thus, carbon 14 may be incorporated into an agent and applied on the skin of an experimental animal. A

skin cancer is produced and thereafter the samples are measured for carbon 14 content in the cancer tissues themselves and in the various organs and excretions. Thus the amount of carbon 14 in the cancer and other tissues has been demonstrated. The location of the breakdown products of the agent have been demonstrated and the mode of action of the cancer-producing agent has been considerably investigated.

Sulphur 35, radioactive sulphur, is a somewhat similar radioisotope to carbon 14. It emits only beta rays and no gamma rays and these beta rays are of extremely weak energy. It has a moderately long half-life, namely 87.1 days. Nevertheless, despite these disadvantages in its use it has been very extensively used in the study of protein metabolism and in the study of the body's use of amino acids. Sulphur 35 has been incorporated in various amino acids—methionine, glutathione, cystine, which for long have been known to be essential building blocks for tissue formation. These labeled amino acids are fed to animals and the tissue samples are measured for sulphur 35 content. In that manner it has been demonstrated as to just how amino acids are taken up in the various organs, how they enter into the various body processes, and the differences in uptake and use due to diseases such as cancer, cirrhosis, diabetes, and vitamin deficiency.

With regard to **radioiron**, two radioisotopes of iron are particularly suitable for tracer work—iron 55 which has a half-life of 4 years, and iron 59 which has a half-life of 47 days. Despite these relatively long half-lives much has been done although the mixture of these two isotopes and their long half-lives have impeded the amount of work that could be done on humans.

Some of the conclusions from these studies are as follows: iron absorption is apparently directly related to the state of iron reserves in the body and not to any anemia.

It has been demonstrated that ferrous iron is more readily absorbed than is the ferric.

The iron absorbed is rapidly utilized into hemoglobin. Radioiron is held in the hemoglobin for a considerable period—as long as the red cell is intact—and thereafter it is re-utilized in a new cell. Its stability forms the basis for red cell blood volume studies.

The principle organ for the storage of iron is the liver in the form of iron-rich protein. Storage in the liver is high when the intravenous route of administration is used, and low otherwise.

Very valuable studies with iron 59 have been performed with regard to whole blood preserva-

tion. Whole blood drawn into an acid-citrate-dextrose solution maintains satisfactory transfusion properties during a storage period of 21 days, 70% of the cells being viable at the end of that time. The red cells maintain satisfactory transfusion properties when withdrawn from blood into this diluent. From 4° to 10° was demonstrated to be the optimal range of temperature during storage. The rate of deterioration from storage at other temperatures could not be retarded by changing to a temperature of 4° to 6°. Non-viable red cells are withdrawn rapidly from the blood stream, that is, within two hours. About 70% of the radioiron from these destroyed cells is rapidly incorporated into the formation of new cells.

Also by means of this method of study the life span of transfused blood cells has been studied, as has the life cycle in the formation of red cells, and we are now beginning to realize some very important concepts regarding the formation of the red cell and its relationship to the reaction to radiation.

Radioactive strontium or strontium 90 has been recently utilized for treating small lesions. Strontium 90 emits only beta rays and no gamma rays and it has a half-life of approximately 25 years. Thus, when strontium 90 is incorporated into a special applicator it can be utilized for its beta rays in the treatment of very superficial lesions such as vascular corneal ulcers and the like. It is a complete substitute for the so-called "radon bulb" which has been utilized in various eye-conditions to diminish their vascularity. It is much safer for the operator to use, it is considerably less expensive, and it is very readily adaptable. It sells at the present time commercially for approximately \$300 whereas a similar radon applicator would sell for something in the order of \$1,200 to \$1,500. Such an applicator will soon be in use at University of Arkansas Department of Radiology.

Radioactive cobalt or cobalt 60 is another isotope which has found wide clinical usefulness and its usefulness is increasing all the time. First with regard to tracer studies, it has been used for studying trace deficiencies in diet. It is readily excreted by the kidney and hence is non-toxic. In many animals, however, it will produce a polycythemia.

The greatest application, however, of radioactive cobalt is as a radium substitute. It has a half-life of 5.3 years and has two highly penetrating gamma rays much more penetrating than those from radium, and a very weak beta ray which

is readily filtered out. We have incorporated cobalt 60 wire into needles and used it completely as a radium substitute being careful to make proper energy corrections. We have used it extensively in the treatment of carcinoma of the cervix, and have also used it in the implantation of other neoplasms. Experimentally we have used it in an effort to compare the biological effects of cobalt with that of radium.

A radioactive cobalt container for external gamma ray treatment has also been devised. It is estimated that the equivalent of a 20 million volt X-ray apparatus can be made for approximately 50 to 60 thousand dollars by means of cobalt 60. The one disadvantage at the present time is that it would require a special uranium pile to produce sufficient quantities of cobalt 60 for widespread use in this regard. Such a uranium pile is now being completed in Canada but is not available in this country. We have been extremely fortunate in obtaining sufficient quantities of cobalt 60 at the University and now have the equivalent of 1200 millicuries of cobalt 60 at our disposal. These 1200 millicuries have cost us a matter of a few hundred dollars. In radium equivalent it would have cost approximately \$36,000.

There are of course many other isotopes which have been utilized both experimentally and clinically in medicine. For example, **calcium 45** with a half-life of 180 days and **strontium 89** with a half-life of 55 days have been studied in the metabolism of various bone salts. Metabolism in rickets and in various bone diseases has been extensively investigated.

Within the past few months the utilization of **radiogallium** in the treatment of osteogenic sarcoma has come to the fore. Radiogallium is an isotope which contains a very penetrating beta ray and has a half-life of about 14 hours. It would appear to be localized very selectively in osteoblastic and rapidly growing bone tissues, and in that connection it has been used somewhat successfully in the treatment of osteogenic sarcoma and its metastases.

Radiogold has also recently come to the fore with at least one useful isotope and may have several other useful isotopes. The isotope which has been used mostly thus far is gold 199 with a half-life of 3.3 days. It has been injected in particulate or unabsorbable form in lymph node metastases particularly of the pelvis, and since it remains in situ in these locations it allows for a powerful local type of irradiation to the lymph node. It emits both a beta and gamma ray with the beta ray effect being predominant

from the standpoint of radiotherapy. The work with radiogold is in its most preliminary phase and its ultimate usefulness cannot as yet be conclusively predicted.

In conclusion one should emphasize that there are so many applications of radioisotopes to clinical and academic medicine today that very few of us find it possible to keep up with all of the inroads and progress that is being made. It is only hoped that society will permit the further utilization of radioisotopes for clinical and medical applications rather than for destruction of civilization.

A HISTORY OF THE PIONEER PHYSICIANS OF WASHINGTON COUNTY, ARKANSAS

ELIZABETH DUPREE ELLIS
Fayetteville

The history of the pioneer physicians of Washington County closely parallels the political, social, and economic history of the county. Indeed, so closely were the lives of the early physicians intertwined with the various phases of the life of the county itself that it is almost impossible to relate their history without relating some of the history of the county.

Washington County has had a colorful past. For some years after the acquisition by the United States, in 1803, of the lands included in the Louisiana Purchase, there were, of course, no white settlers in Northwest Arkansas. The slowness with which settlers came in was due in part to the inaccessibility of the country and in part to the changing political status of the new territory. In the years between 1803 and 1836, when Arkansas achieved statehood, Northwest Arkansas was subject to a number of different territorial jurisdictions. And for a number of years, too, the status of Indian claims to the country was uncertain. In 1808 the Osage Indians ceded a large part of the present state of Arkansas to the United States.¹ In 1817 the Cherokee Indians were given the land lying between the Arkansas and White rivers, but the grant conflicted with the "Lovely Purchase" of 1816, and it was not until 1828 that the western boundary of the present state was established and Washington County incorporated.²

Just before the formation of Washington

¹ Dallas T. Herndon, *Centennial History of Arkansas*, S. J. Clarke Publishing Co., Chicago—Little Rock, Vol. I, pp. 62, 63.

² *Ibid.*, p. 812; also Ed. E. Dale, "Arkansas and the Cherokees," *Arkansas Hist. Quarterly*, Vol. VIII, No. 2, Summer, 1949, Ark. Hist. Assoc., p. 96.

County, a few white settlers began to come into the new territory. In 1827 the first group of pioneers came from Crystal Hill, a settlement fifteen miles north of Little Rock, and settled at Boonsboro, later called Cane Hill. The Reverend John Buchanan, greatgrandfather of Dr. Fount Richardson and Mrs. Fred Ogden of Fayetteville, and the Reverend Andrew Buchanan were influential in organizing the first Presbyterian church in the county, in 1828, and in founding, in 1834, the school which later became Cane Hill College.

The first physician to come into the county, so far as we know, was Dr. James Boone, who settled about five miles east of Fayetteville, in 1830. Doctor Boone became a highly respected citizen of the new county. He was active as a Whig in politics. "He was a member of the Constitutional Convention of 1836, and served a term in the House of Representatives."³

Some time during the 1830's, Dr. T. J. Pollard and Dr. John I. Stirman moved into Washington County from Kentucky; Dr. Charles W. Deane came from Tennessee; and Doctor Throckmorton arrived. Doctor Throckmorton settled outside of Fayetteville, and he and Doctor Pollard practiced together until Doctor Throckmorton moved to Texas.⁴ For about fifty years Doctor Deane was to be a prominent physician in the county, and until the end of the century Doctor Pollard was to be intimately connected with the life of Fayetteville and the county as a whole. Besides these men, a Dr. Adam Clark is known to have helped organize the first Methodist Church in Fayetteville, about 1834 or 1835, and it is presumed he was a physician.⁵

All of these men very early became acquainted with the hardships and violence of a pioneer country. The nearness of the newly formed county to the Indian Territory added the hazards of "border incidents" to the difficult living conditions common to all pioneer settlements.

A part of the Cherokee tribe's having signed a treaty with the United States government in 1835, surrendering certain lands in Georgia, a mass migration of Cherokees, to join the "Western Cherokees," took place in 1838. One weekend the "Nation" passed through Fayetteville in a long procession. Certain residents of the town sold them whiskey, and a half-breed Indian was killed in a grocery store incident. Later on, the man who killed him put his bowie knife through a white man, we are told, and only Doc-

tor Pollard's skill saved him from death. Doctor Pollard had seen the incident from his window and had the man brought to him for treatment.⁶

After the murder, on the same day in 1839, of Major Ridge, leader of the Cherokee "Treaty Party," his son, John Ridge, and his brother, the older Boudinot,⁷ there was friction between the Treaty Party of Stand Watie (he later became a high-ranking Confederate officer) and John Ross, the Principal Cherokee Chief. (Colonel Elias Boudinot, the son of the elder Boudinot, was later a distinguished lawyer in Fayetteville.) Runaways from almost every part of the Union collected on the border line between Arkansas and the Indian Territory after 1838 and preyed on whites and Indians alike. It is said that stores were built on the border line so that men committing crimes on one side of a store could escape punishment by crossing over to the other side. The early physician in Washington County had an intimate acquaintanceship with gunshot and knife wounds!⁸

In the 1840's it became possible for stagecoaches to meet trains to the north of Fayetteville and boats on the Arkansas River to the South. Dr. T. J. Pollard and his brother, Dr. Wade Pollard, opened a line of stagecoaches. Later they sold the line (in 1857) to the famous Butterfield Stage Lines. The Butterfield St. Louis-San Francisco Stage Line added immeasurably to the economic progress of the new country. (Mr. Butterfield moved from Utica, New York, to Fayetteville.)⁹

In 1849, when "yellow fever," as they called it, struck the county, a group of about ninety persons left Washington County for the West. Dr. Samuel McCulloch, of Cane Hill, and a Doctor Cunningham were among the number.¹⁰

Meanwhile, eager to bring the culture of their native state to the new state, a group of petitioners, including Dr. T. J. Pollard, sought, and in 1841 was granted, a dispensation for a Far West chapter of Masonry at Fayetteville. A few years earlier, a group of Masons had been granted a charter as Washington Lodge Number One—the oldest surviving lodge in the state. Besides Doctor Pollard, Doctor Deane and, later, Dr. W. B. Welch and Dr. C. S. Gray were to be very active in Masonry.¹¹

Doctor Pollard seems to have been tireless in advancing the welfare of the people of the county. In 1848 he helped organize the Christian Church in Fayetteville, bringing in the young

³ History of Northwest Arkansas, Goodspeed Publishing Co., Chicago, 1889, p. 147. (Hereinafter cited as Goodspeed's History.)

⁴ Ibid., pp. 239, 240.

⁵ Ibid., p. 297.

⁶ Ibid., pp. 188, 189.

⁷ Ibid., p. 152.

⁸ Ibid., pp. 185-189.

⁹ William S. Campbell, One Hundred Years of Fayetteville, 1828-1928, Fayetteville, Arkansas, 1928, p. 19.

¹⁰ Goodspeed's History, p. 242.

¹¹ Ibid., 246, 247.

Reverend Robert Graham as pastor. In 1850 he was influential in having Robert Graham found Arkansas College. In 1852 the college was chartered as the first degree-conferring institution in the state. It was located on College Avenue, on the site of the present Christian Church.

In 1854, we are told, young Dr. James Stevenson came to Fayetteville from Kentucky and opened the first drug store in the town.¹² The earliest physicians had to carry their own drugs. The doctor who rode on horseback about the country, carrying his "pill-bags" slung across his saddle, was a familiar figure.

The early physicians took a keen interest in politics. In 1861 Doctor Pollard was active at a mass meeting held to discuss the calling of the State Convention and the sending of delegates to it from Washington County.¹³ Though the county was severely torn in its sympathies between the Northern and Southern causes, and this even after the fall of Fort Sumter, the preponderance of the citizenry, of course, had Southern sympathies.

"About the first of July, 1861," Brigadier General Ben McCulloch, "who was in charge of Confederate troops protecting" Arkansas and the Indian Territory, issued a proclamation calling for troops.¹⁴ Many Federal sympathizers now fled to Missouri. The Battle of Pea Ridge, in adjoining Benton County, was the signal for an "exodus of Union sympathizers" to Federal lines.¹⁵ Colonel M. La Rue Harrison organized the First Arkansas Cavalry Regiment, consisting mostly of Washington County men, and came to Fayetteville to establish a post.¹⁶ After the Battle of Prairie Grove, in December of 1862, and the retreat of General Hindman's army (Doctor Welch served as Surgeon at the Battle of Prairie Grove), the county was left to the Federals.¹⁷ A determined attempt to rid the country of "bushwhackers" was made by Federal troops. In April of 1863, General W. L. Cabell attacked Fayetteville. Colonel Harrison wrote his superior officer that the Confederate troops left in Federal hands all the dead and wounded which they could not carry away with them, "leaving Surgeon Russell and Assistant Surgeon Holderness to take charge of them."¹⁸ In a postscript he said that he should not neglect to mention that S. D. Carpenter, Assistant Surgeon of Volunteers, assisted by Assistant Surgeons Coffee, Drake, and Tefft were "actively engaged during the contest in carrying the wounded from the field and

attending to their wants."¹⁹ In view of what happened at the Battle of Pea Ridge, when the dead and wounded were simply left lying on the field, the dead later being put in trenches dug as common graves, the surgeons at the Battle of Fayetteville seem to have been remarkably humane. (Doctor Tefft practiced at Springfield, Missouri.) On October 3, 1863, a detachment of General Price's army under Major General Fagan, which was then stationed at Cane Hill, unsuccessfully attacked Fayetteville. From then until the end of the War, intermittent guerilla activities laid waste to the countryside.²⁰

A number of Washington County physicians took an active part in the War. Dr. W. B. Welch served as Surgeon in the 34th Arkansas Confederate Cavalry, under Colonel W. H. Brooks, and Dr. J. M. Lacy was Assistant Surgeon in the same regiment. Serving in other regiments were: Dr. Jaran Bryant (in a South Carolina regiment); Dr. Evans Atwood; Dr. John Hight (in a Tennessee regiment); and Dr. R. M. Reese (although this was before he became a physician). Dr. T. J. Pollard also had some service as a surgeon with the Confederate army.²¹ Dr. S. P. Sample enlisted in the Union army in Missouri, before he moved to Arkansas, and Dr. O. D. Slaughter served as a medical orderly on the Northern side. Dr. Robert J. Carroll was stationed with Federal troops in Fayetteville during the War and he remained afterwards to practice.

M. La Rue Harrison, a man of great integrity of character, remained in Fayetteville to become the first post-war mayor of the town. Reconstruction days in the town and county were filled with hardships. Many of the male population had suffered wounds or death, most of the town of Fayetteville had been burned, much of the farm land had been ravaged, economic conditions were chaotic, and eradication of bitterness was difficult. It is interesting to know that, in June of 1872, Dr. T. J. Pollard's wife, Mrs. Lizzie Pollard, became the first president of the Southern Memorial Association, a ladies' society organized to care for the graves of Confederate dead in Fayetteville. The cemetery on East Mountain was dedicated by the Association in 1873.²²

In 1866 a Doctor Cox moved to Fayetteville from Osceola, Missouri, and established the only drug store in the town. (The public Square had been burned in 1862.)

Even in the midst of the confusion of Reconstruction days, though, physicians were further-

¹² *Ibid.*, p. 243.

¹³ *Ibid.*, p. 204.

¹⁴ *Ibid.*, p. 209.

¹⁵ *Ibid.*, 210.

¹⁶ *Ibid.*, p. 211.

¹⁷ *Ibid.*, 212, 213.

¹⁸ *Ibid.*, p. 215.

¹⁹ *Ibid.*, p. 216.

²⁰ *Ibid.*, p. 223.

²¹ *Ibid.*, p. 1002.

ing the best interests of their profession. In November of 1870 physicians from a number of counties met at Little Rock and organized the Medical Association of the State of Arkansas. In 1874, Dr. W. B. Welch of Washington County, was elected president of the Association for the ensuing year; and in October of 1875, when a new constitution and by-laws were adopted and the name changed to the State Medical Society of Arkansas, he was elected the first president of the new society.²³

On July 2, 1872, the Washington County Medical Society was organized at the office of Dr. T. J. Pollard. Those who signed the constitution that day were: Drs. T. J. Pollard, W. B. Welch, S. F. Paddock, R. J. Carroll, Geo. W. Holcomb, E. F. Brodie, H. D. Wood, F. N. Littlejohn, John M. Lacy, and John C. Grace. They elected Dr. T. J. Pollard as president, Dr. W. B. Welch as vice-president, Dr. R. J. Carroll as recording secretary, Dr. J. C. Grace as correspondent, and Dr. Geo. W. Holcomb as treasurer. Dr. W. S. Wynne and Dr. J. C. Homna were at the meeting, but their names do not appear on the roster of members.²⁴

On January 22, 1872, the Arkansas Industrial University—later the University of Arkansas—was opened at Fayetteville. Long noted for its interest in higher education, Washington County had offered more than any county in the state toward the University's establishment. Needless to say, the opening of the University profoundly affected the history of medical education, not only in the county, but in the entire state. Only a few years later, too, in 1879, the Medical School was opened at Little Rock and accepted as the medical department of the University.²⁵ With the passing of the next few years we may say that the era of the pioneer physician is at an end.

In order to understand the vastness of the achievement of the physicians of pioneer days, it is necessary to understand not only the conditions under which they practiced their profession, but also the conditions under which they acquired an education. Many men received their elementary education in log school houses which were lighted, in summer, by a space in each wall of the building where a log had been removed, and heated in winter (the wall openings' being then covered) by a single fireplace. Benches

were logs, split in half, and were backless. Pre-medical school work included study under a preceptor, an established physician. Medical school training had to be sought outside the state. When they began practicing, these men had to brave the hazards of a rough country, with its attendant violence (several met violent deaths), travel over often impassable roads, and contend with meagre means of communication. Rivers were to be forded on horseback; wild animals were encountered in sparsely settled country. And while a surprising number of Washington County physicians were medical school graduates, the drugs, instruments, and medical information available for use in practicing their profession were, judged by present-day standards, inadequate indeed. The horizons of medical knowledge were yet to be extended by the acceptance of the germ theory of disease, the practice of antisepsis, the use of anesthesia, and the discovery of antitoxins and the twentieth century "wonder drugs." As men had believed in the Middle Ages, so these early physicians believed that the appearance of "laudable pus" was necessary to the healing of a wound. Bleeding the patient was yet an accepted mode of treatment for many diseases. The wonder is that, with such limited resources, the pioneer physicians should have saved so many lives and alleviated so much suffering. It is a testimony to their skill that Washington County has long been noted for the longevity of its citizens!

It is impossible in a limited space to do more, after listing the names of the known pioneer physicians of the county, than mention the salient facts in the lives of some men and relate the few facts about the others that are known and of particular interest.

On the rolls of the Washington County Medical Society are listed the names of the following men who were members of the society before 1881—the year when the first registration of physicians in the state was made.

Thomas J. Pollard, William B. Welch, Samuel F. Paddock, Robert J. Carroll, George W. Holcomb, Edward F. Brodie, Harvey D. Wood, Felix N. Littlejohn, John M. Lacy, John C. Grace, John C. Whaley, Charles W. Deane, John G. Smith, Samuel McCulloch, Clifton S. Gray, Benjamin F. Fortner, Sidney B. Jernigan, John W. Jones, B. F. Williams, W. N. Yates, G. R. Boles, B. M. Hughes, O. H. Habson, J. O. Ducker, J. W. Waters, J. R. Southworth, J. R. Brewer, Jaran Bryant, T. J. Hubbert, John Young, Thomas Quarles, D. Christian, Andrew S. Gregg, and R. B. Gladden. The name of Dr. R. M. Reese

²² *Ibid.*, p. 233.

²³ Committee on the History of the Arkansas Medical Society, Dr. Frank Vinsonhaler, chairman, *History of the Arkansas Medical Society*, Arkansas Medical Society, Fort Smith, Arkansas, 1943, pp. 8, 9.

²⁴ Minutes and Roster of Washington County Medical Society, 1872.

²⁵ Herndon, *op. cit.*, p. 940.

does not appear on the Society's list of members, but it is known that he attended meetings.

Included in our sketch of the individual physicians who practiced medicine in the county in pioneer days—in addition to those listed on the Society's roll—will be the men who are known to have practiced before the organization of the County Society as well as a number of men who practiced in later years, but who were not members of the Society.

Since the first settlement in the county was made at Boonsboro, or Cane Hill, we shall first consider the physicians who practiced in this community.

We are told that a Dr. Dryden Dold arrived in Cane Hill in 1848.²⁶ He was born in Augusta

²⁶ Goodspeed's History, p. 936.

County, Virginia, in 1812, and studied in the Medical Department of the University of Virginia and in Philadelphia. He had practiced in several states before settling at Cane Hill.

Dr. W. B. Welch, one of the most distinguished physicians ever to practice in the county, was born in 1829, in Scottsville, Kentucky. His father later moved with his family to Huntsville, Alabama, and Doctor Welch was educated there and in the Medical Department of Nashville University. He received his M. D. degree in 1849. He practiced at Somerville, Alabama, before locating at Cane Hill. (In the Membership Roster of the Washington County Medical Society, Doctor Welch names Valhermoso Springs, Alabama, as his former place of residence.) During the Civil War he served as Surgeon with Confederate troops for four years. After the War he remained in Cane Hill until 1881, when he moved to Fayetteville. Doctor Welch specialized in surgery at a time when few men attempted it. He was a "dominant factor" in the founding of the Arkansas State Medical Society, and was at one time first vice-president of the American Medical Association. He was a moving spirit in the founding of the Fayetteville City Hospital, and in his will left a bequest to the institution. On his death Mrs. Welch gave the University of Arkansas Medical School his entire library.²⁷

Dr. George W. Holcomb graduated at the Louisville Medical College and practiced at Cane Hill for a number of years before moving to Shiloh (later called Springdale). He, like Doctor Welch, was active in the organization of the Washington County Medical Society. In later years he moved to Clinton, Missouri. Dr. Samuel McCulloch also practiced at Cane Hill. He came to Arkansas about 1836 from Tennessee. His great-nephew and namesake, Mr. Sam B.

Wheeler, of Fayetteville, states that Doctor McCulloch was gone to California for three years after the Gold Rush. He returned to Arkansas by way of the Isthmus of Panama (following, on foot, an old Spanish trail), Cuba, and the Mississippi River. Later he moved to Texas.

Dr. John M. Lacy, Dr. W. N. Yates, and Dr. R. M. Reese all practiced at Cincinnati, near Cane Hill, in the early days. Doctor Yates was born at Cane Hill, and graduated at Cane Hill College. In 1878 he graduated from the Missouri Medical College, at St. Louis. After practicing at Cincinnati he moved to Fayetteville, where he practiced for many years. Doctor Yates served on the University of Arkansas' Board of Trustees and was influential in having the University Infirmary established. He died in November of 1918, during the influenza epidemic. Doctor Reese was born in Tennessee. He went to the University Medical School in Baltimore, after having served in the Confederate army. He was shot in the foot at Chickamauga, and told of maggots' infesting the wound. One wonders if the maggots didn't save the foot! Doctor Reese died in 1877.

Drs. Felix N. Littlejohn, Jaran Bryant, and J. W. Waters practiced at Evansville, also in the western part of the county. Doctor Littlejohn graduated from the South Carolina Medical College in 1849. He and Doctor Bryant were brothers-in-law. Doctor Bryant was born in Spartanburg, South Carolina, in 1839. He graduated from the Medical College of the State of South Carolina in 1861. He practiced in Spartanburg County until May of 1862, when he enlisted in the South Carolina Infantry. He was soon given a commission as an Assistant Surgeon. After the War he continued to practice in Spartanburg County until 1879, when he moved to Hot Springs, Arkansas. The same year he moved to Evansville. Doctor Bryant was at one time a member of the State Legislature of South Carolina. In 1878 he received a degree at the Atlanta, Georgia, Medical College. Doctor Bryant was keenly interested in the study of languages and read, it is said, seven different ones. Doctor Waters graduated from the Missouri Medical College in 1879.²⁸

Dr. J. R. Brewer, who practiced at Dutch Mills, close to Lincoln, graduated in medicine at Vanderbilt University. He came to Washington County from Altus, Arkansas, and later moved back there. Still later he practiced at Muskogee, in the Indian Territory (now Oklahoma). Dr. Edward F. Brodie, who practiced at Billingsley,

²⁷ Herndon, op. cit., pp. 228, 229.

²⁸ Goodspeed's History, pp. 919, 920.

graduated from the University of Nashville. He was the brother of the late Mrs. Stephen K. Stone, of Fayetteville.

Very shortly after the settlement of Cane Hill, the Reverend Andrew Buchanan, uncle of the Reverend John Buchanan, had made a settlement at Prairie Grove, to the west. (Before the settlement of Cane Hill, even, he had "staked out a claim" to the site of the spring now called "Mock Spring," at Prairie Grove.) Dr. Samuel E. Rogers, an uncle of Dr. Will Mock, practiced at Prairie Grove. He was born in 1834 at Pendleton Court House, South Carolina. In 1839 his father moved the family to Hall County, Georgia, and in 1851 he moved to Washington County, Arkansas. Doctor Rogers began the study of medicine in Georgia and continued his work in Arkansas under the preceptorship of a Doctor Clark and a Doctor Rogers. He began practicing during the Civil War.²⁹ His granddaughter, Mrs. Roy Williams, of Fayetteville, remembers his vivid descriptions of limb amputations at the Battle of Prairie Grove.

Dr. John G. Smith practiced at Viney Grove, near Prairie Grove. He joined the Washington County Medical Society in 1873. Dr. John C. Whaley practiced at Farmington, between Prairie Grove and Fayetteville. Dr. Sidney B. Jernigan practiced at Wedington Gap and Fayetteville. He was the brother of Mrs. Josephine Davenport, of Fayetteville. Doctor Jernigan was killed when he fell from his horse and was trampled upon.

Fayetteville was peculiarly fortunate in the calibre of her early physicians. Most of them were medical school graduates, and all of them were men of stature in the community. Besides Dr. Janes Boone, who lived just east of town, the following men were early practitioners in Fayetteville: Drs. T. J. Pollard, Throckmorton, Wade Pollard, J. I. Stirman, Charles W. Deane, James Stevenson, S. F. Paddock, B. F. Fortner, Rhoten F. Lotspeich, Robert J. Carroll, Cox, John C. Grace, Thomas Quarels, John W. Jones, Clifton S. Gray, G. R. Boles, B. M. Hughes, O. H. Habson, J. O. Ducker, J. R. Southworth, W. B. Welch, H. D. Wood, and A. S. Gregg. (A Dr. R. M. Clark is also said to have been an early practitioner in the town, but nothing is known concerning him.)

Dr. T. J. Pollard (Dr. "Jeff" Pollard), an 1828 graduate of Transylvania University, in Kentucky, seems to have been a real Titan among the early practitioners. Coming into the county in the early thirties (He lived in Palmyra, Missouri, just before coming to Arkansas), he identified him-

self for many years with everything he considered for the best interest of her people—politically, socially, and educationally, as well as medically. His life story, indeed, may be read in the history of the county given above. The following incident that Doctor Pollard related, in his later years, at a meeting of the Washington County Medical Society, is significant both of the times through which he had lived and of the magnanimity of his character. He was returning, he stated, from calling on a patient on White River when he had a sudden violent hemorrhage from the lungs. Fearing that death was imminent, he dismounted from his horse and proceeded to write an account of what had happened to him, in order, he said, that no one might be blamed with making an attack on him and causing his death. Doctor Pollard died about 1900. He was buried in Evergreen Cemetery, on a hill overlooking the town for whose welfare he had labored so many years.

Besides Doctor Throckmorton, Doctor Deane was at one time associated in practice with Doctor Pollard, as was Doctor Stevenson. Doctor Deane lived for many years in a home on College Avenue, just east of Doctor Pollard's home on Meadow Street. Later he moved to a farm which is now a part of the University of Arkansas Experimental Farm. Doctor Deane wore his hair quite long—shoulder length. Doctor Stevenson is remembered as a kind, gentle man. He had apparently had smallpox (a terrible scourge in those days), because his face was deeply pitted with scars. Mrs. James Carlisle, at whose birth Doctor Stevenson "officiated," relates the manner of his death. He was returning home on horseback from calling on a patient and had reached a hill near the present Veterans' Hospital. A covered wagon, carrying household effects, was just in front of him. When the wagon wheels went over a rough spot in the road, a rifle which was tied to the side of the wagon went off, and the bullet hit Doctor Stevenson. He died in a few days.

Dr. J. I. Stirman was active in state politics, as well as in his profession. (Mrs. T. J. Pollard was a Stirman before her marriage.)

Dr. Samuel F. Paddock was born in Utica, New York, in 1833. His father was a banker at Oneida, New York. After working for a time in his father's bank, he went to Rush Medical College, in Chicago, graduating in 1858. He came immediately to Arkansas. In Fayetteville he engaged in the drug business in connection with his practice of medicine. For many years he was the Pension Examiner of Washington

²⁹ Ibid., p. 1013.

County. He was a prominent Republican, and was Unionist in sympathy during the War. It is interesting to note that his wife was a direct descendant of William Brewster, who came to this country in the Mayflower. Doctor Paddock died in 1885.³⁰ His son, the former Dr. Charles

³⁰ Herndon, *op. cit.*, pp. 1097, 1098.

B. Paddock, practiced in Fayetteville many years, and his grandson, Dr. Charles Paddock, practiced in Fayetteville until recently.

Dr. Benjamin F. Fortner graduated from the Medical Department of Nashville University in 1872. He was from Boonsboro and had studied medicine under Doctor Welch. He practiced for a while at Hico, near Cincinnati, but practiced many years at Fayetteville. Doctor Fortner gained a great deal of fame in the country when a Mr. Muncie swallowed his dental plate (they were crude in those days) and had to have it removed. Mr. Muncie was fond of telling how Doctor Fortner made an incision into his neck and throat in order to remove the plate. Doctor Fortner later moved to Vinita, in the Indian Territory. He died near Bentonville, Arkansas.

Dr. Rhoten F. Lotspeich came to Fayetteville during the Civil War and practiced there for a number of years. He married Miss Annie Duke, the aunt of Mrs. J. C. Futrall. Doctor Lotspeich lived on Lafayette Avenue, in what is now one of the oldest brick homes in Fayetteville.

Dr. Robert J. Carroll, who was from Philadelphia and who graduated from Jefferson Medical College, practiced in Fayetteville for a number of years after the War. He was very fond of hunting and always kept hunting dogs. For years, a picture of Doctor Carroll, with his dogs, hung in Col. T. J. Hunt's home, "Waxhaws," the former home of Governor Archibald Yell, at Fayetteville. Doctor Carroll and Doctor Wood were close friends and associates, and Doctor Wood visited him after he moved "back North," to Red Hook, New York.

Doctor Cox, who came to Fayetteville in 1866, built one of the early homes on College Avenue. When the Hansard family moved to Fayetteville from Missouri in 1878, they rented the Cox home and the farm surrounding it (the house is now in a densely built-up district) for a little over eight dollars a month!

Little is known of Doctor Grace except that he was one of the charter members of the Washington County Medical Society. Dr. Thomas Quarles graduated from the Missouri Medical College in 1880. Dr. John W. Jones was a brother of the late Theo Jones, of Fayetteville.

Dr. Clifton Sidney Gray was born near Sedalia,

Missouri, in 1850. He went to the University of Missouri at Columbia, graduating when he was seventeen years old. He was under the preceptorship of a professor of chemistry and physics at the University. Thereafter he studied for two years at the University of Louisville, Kentucky, and spent one year at the St. Louis Medical College, graduating in 1872. In 1876 he moved from Nevada, Missouri, to Washington County, Arkansas, and began to practice at Fayetteville. Later he spent a year at Bellevue Hospital Medical College. At one time he was an honored vice president of the Arkansas State Medical Society.³¹ In later years Doctor Gray moved to Little Rock, where he specialized in the treatment of diseases of the eye, ear, nose, and throat.

Dr. G. R. Boles graduated from the University of St. Louis Medical Department in 1866. Dr. B. M. Hughes graduated from the St. Louis Medical College in 1872. He was from Alma, Arkansas. Dr. O. H. Habson graduated in 1860 from the University of Louisiana. He was from Hot Springs. His home occupied the site on College Avenue afterward occupied by Doctor Welch's home. Dr. J. O. Ducker graduated from Jefferson Medical College in 1877. Dr. J. R. Southworth graduated from Vanderbilt University in 1878. He was also a graduate in dentistry and practiced dentistry in Fayetteville for many years. He came to Arkansas from Nashville.

We have mentioned Doctor Welch's practicing for many years (thirty-two) in Cane Hill. He was also for many years a leading physician at Fayetteville, and one of her most highly respected citizens. In 1884 he was made the first president of the newly organized Washington County Bank, and he was as also mentioned above, from its founding intimately connected with the history of the Fayetteville City Hospital. Doctor Welch was a "gentleman of the old school," a scholar, and a man of rare graciousness of character.

Dr. Harvey Doak Wood was born on the Middle Fork of White River, Washington County, on January 8, 1847. His early education was acquired in a log school house. He studied medicine under the preceptorship of Dr. B. F. Williams. He entered St. Louis Medical College in 1869 and graduated in 1872. He began to practice at Maguire's Store, east of Fayetteville, and then practiced at Farmington for two years before moving to Fayetteville, in 1874. Doctor Wood was keenly interested in organized medicine and was vice-president and president of the Arkansas State Medical Society, was several times president of the Washington County Medical Society, and was Washington County Health,

Officer. In 1913 he organized the County Health Office.³² Throughout his life, Doctor Wood attended clinics and lectures on medical subjects. He was greatly interested in appliances for fractured limbs, and he contributed words to the American Medical Dictionary. Doctor Wood was for many years the only surviving charter member of the Washington County Medical Society. He died May 13, 1938, when he was in his ninety-second year.

Dr. Andrew S. Gregg, long a beloved physician of Fayetteville, was born near the town on July 6, 1857. His father, a native of Alabama, served as a colonel in the Union army during the Civil War. During Reconstruction days he served as a Judge of the Arkansas Supreme Court. Doctor Gregg received the B. S. degree from the University of Arkansas in 1878. He taught school for a while and then studied medicine under Doctor Wood. In the fall of 1878 he went to the St. Louis Medical College, receiving his M. D. degree in 1881.³³ Doctor Gregg was a skillful and learned physician and a man of real nobility of character. He died on November 21, 1938.

Dr. B. F. Williams practiced at Maguire's Store in the early days. Doctor Williams was from Virginia and was a graduate of the St. Louis Medical College. (Judge B. F. Campbell, of Fayetteville, is the son-in-law of Doctor Williams.) Dr. A. P. Johnson practiced at Oxford's Bend, also east of Fayetteville.

Dr. George Carter was the first physician in the southeastern part of the county. He was born in Tennessee in 1800 and came to Washington County in 1848. Three of his sons practiced at Sulphur City—Drs. John, Jerd, and George Carter. Dr. George Carter, Sr., died in 1875. Dr. George Carter, Jr., the father of Judge Witt Carter, of Fayetteville, was born on May 7, 1852, and died on April 3, 1928.

Dr. G. W. Cannon and Dr. S. P. Sample practiced at West Fork, south of Fayetteville. Doctor Cannon graduated in Louisville, Kentucky, it is thought, and he practiced in Cassville, Missouri, before coming to West Fork. Doctor Sample was born in Greene County, Tennessee, in 1841. He "grew to maturity" in Sullivan and Grundy counties, Missouri. He began the study of medicine under a Doctor Manlow. He graduated from Nashville Medical College and located at Modena, Missouri. In 1861 he enlisted in the Union army and "served under Generals Grant and Sherman until the close of the War."

"After the War he located in Mercer County, Missouri." In 1870 he went to Franklin County, Arkansas, and in 1877 he moved to Washington County. In 1881 he moved to West Fork. He was one of the examiners of the Springdale Pension Board.³⁴

Dr. J. H. Kelly practiced at Goshen, east of Fayetteville. He was born in Habersham County, Georgia, in 1833. Having studied medicine previously, Doctor Kelly graduated from the Atlanta Medical College in 1859. He practiced in Texas during the War, from 1862-67. Afterwards he practiced at Hindsville, Arkansas, for four years. In 1868 "he was licensed to preach in the Methodist Church." In 1878 he moved to Goshen, endeavoring to retire from practice. From 1878 to 1883 he engaged in merchandising and practiced medicine also. "He was the postmaster at Goshen for five years."³⁵

Dr. John P. Hight practiced at Wesley, east of Fayetteville. He was born in Bedford County, Tennessee, in 1843. He was educated at Unionville (Tennessee) College. During the Civil War he served as a lieutenant in the Confederate army from Tennessee. After the War he farmed and studied medicine. He attended medical lectures in St. Louis in 1871 and again in 1872. Then he came to Northwest Arkansas, where he practiced medicine and became a highly successful stock raiser as well.³⁶ Doctor Hight later lived in Fayetteville for many years.

Several physicians practiced at Elm Springs, north of Fayetteville, in the early days: Dr. Marion D. Steele, Dr. G. A. Wilkerson, Dr. T. J. Hubbert, and Dr. D. Christian. Doctor Steele was born in 1824 in Bedford County, Tennessee. He began the study of medicine when he was nineteen. When he was twenty-two or three (in 1847), he moved from Tennessee to Lawrence County, Arkansas, where he practiced for nine years. In 1857 he moved to Elm Springs, and he practiced there until 1874. After that time he engaged in merchandising.³⁷

Doctor Hubbert graduated from the St. Louis Medical College in 1879. Before moving to Arkansas he practiced at Iradel, Texas. Doctor Christian was born in Warren County, Tennessee, in 1851. He was taken to Northwest Arkansas as a child. After teaching school for a while he studied medicine under Doctor Hubbert. In 1879 or 1880 he graduated from the St. Louis Medical College and settled at Elm Springs. In 1883 he moved to Springdale. A little later he went to New York to attend Bellevue Hospital

³² Herndon, op. cit., pp. 678, 679.

³³ Ibid., pp. 955, 956; Hempstead's Historical Review of Arkansas, The Lewis Publishing Co., Chicago, 1911, Vol. III, pp. 1120, 1121.

³⁴ Goodspeed's History, p. 1014.

³⁵ Ibid., p. 968.

³⁶ Ibid., p. 1095.

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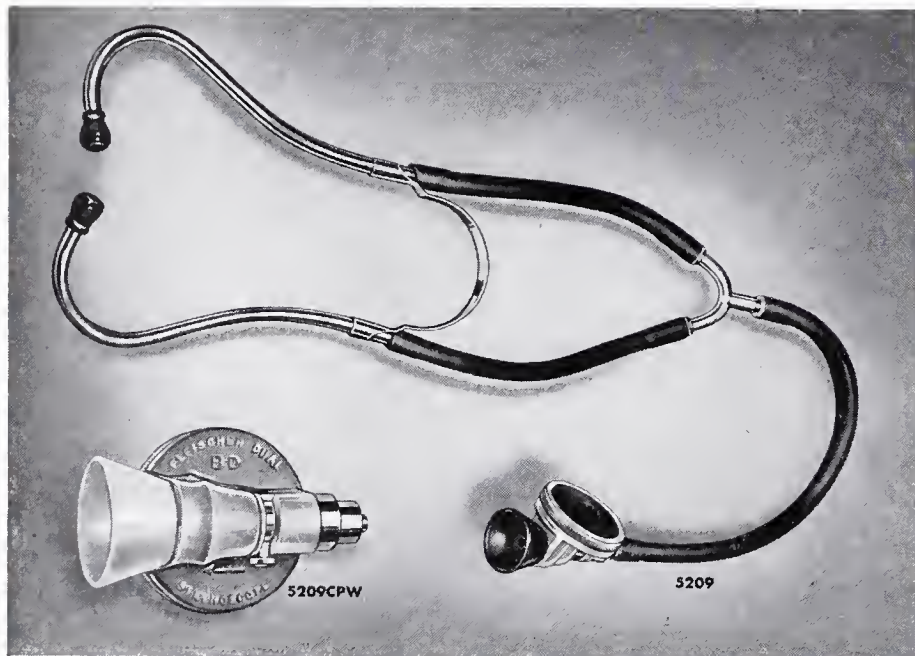
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Medical College. He also studied at the New York Post-Graduate Medical School.³⁸ Throughout his long years of practice, Doctor Christian was held in esteem and affection by his colleagues and patients alike.

The original town of Shiloh (Springdale) was laid out about 1868 by the Reverend John Holcombe. He had settled the land in 1842 and had established the Shiloh Primitive Baptist Church in 1843. It was not, however, until after his son, Joseph Holcomb³⁹ (father of the late Mrs. E. F. Ellis, of Fayetteville), purchased the old homestead, in 1869, that the town was plotted and the streets named.⁴⁰ (Joseph Holcomb gave a lot to anyone who would construct a building for business purposes.) Dr. George Holcomb, another son of John Holcombe, Dr. Hiram Dailey, Dr. J. W. Kennedy, Dr. R. B. Gladden, Dr. Evans Atwood, Dr. O. D. Slaughter, Dr. D. Christian, and Dr. John Young all practiced at Springdale.

We have mentioned above Doctor Holcomb's having practiced at Cane Hill before coming to Springdale. Doctor Dailey was one of the first practitioners in Springdale. Dr. James Monroe Kennedy (the grandfather of Mrs. Frank Deaver, of Springdale) was a native of Kentucky. He was educated at Louisville. He came to Springdale from Saline County, Missouri. Dr. R. B. Gladden came from Cane Hill to Springdale. He graduated from the Medical Department of Arkansas Industrial University. (His father built the Gladden Hotel, still standing, at Springdale.) After practicing at Springdale for some time, Doctor Gladden moved to Purdy, Missouri. Dr. Evans Atwood practiced just outside Springdale. He was born in Vermilion County, Illinois, in 1836. His father and mother emigrated to Texas for ten years, and then, when Doctor Atwood was thirteen years old, moved to Arkansas. Doctor Atwood studied medicine under a preceptor for two years and then attended a course of lectures at the Louisville Medical College in 1873-74, returning home to practice. He was a lieutenant in the Confederate army during the War. He was held as a prisoner from May 1, 1863, until the close of the war.⁴¹ Dr. O. D. Slaughter, grandfather of Judge Loney Slaughter, of Fayetteville, practiced in Springdale after the War. He donated land for the Mt. Vernon Baptist Church built near Springdale in 1877.

Dr. John Young was born in Overton County, Tennessee, in 1836. At nineteen he commenced the study of medicine under the preceptorship of Dr. D. S. Booth, of Missouri. "He went West in the winter of 1862-63," spending "twelve years on the plains and in the mountains, freighting" and "mining." In 1875 he graduated from the Missouri Medical College. In 1879 he located at Springdale, Arkansas, coming there from Sherman City, Kansas.⁴² He died in Springdale in 1914.

In a very particular sense, Doctor Young seems to be a link between the pioneer physicians and the physicians of our own day. Dr. Edward Forrest Ellis, of Fayetteville, studied under the preceptorship of Doctor Young before entering medical school; and he held Doctor Young in the highest esteem, both for his scholarship and wide general learning, and for his skill in the practice of medicine.

Grateful acknowledgment of valuable assistance in compiling this history is made to Dr. Fount Richardson, secretary of the Washington County Medical Society, who graciously granted access to the Membership Roster and early Minutes of the Washington County Medical Society.

Acknowledgment of generous help in collecting biographical data is made to the following descendants of early residents of Washington County. Mrs. Ellen Richardson, Mrs. Fount Earle, Mrs. R. D. Baldwin, Mrs. J. A. Rackerby, Mrs. John C. Futrall, Mrs. A. M. Byrnes, Mrs. James Carlisle, Mr. Sam B. Wheeler, Mrs. Myrtie Rhea, Judge Witt Carter, Mrs. Roy Williams, Mrs. J. Frank Deaver, Mrs. Bruce Holcomb, and Miss Mildred Gregg. Especial indebtedness is expressed to Dr. E. F. Ellis for unlimited help in assembling both historical and biographical data.

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Presented by the Biography Committee, Woman's Auxiliary to the Arkansas Medical Society. Mrs. Chas. W. Dixon, Chairman.

³⁷ *Ibid.*, p. 1021.

³⁸ *Ibid.*, p. 925.

³⁹ The spelling of this family name varied with different members.

⁴⁰ F. Kennedy Deaver, "Sidelights on Springdale's Early History," *Springdale (Ark.) News*, May 24, 1934, p. 3.

⁴¹ *Goodspeed's History*, pp. 911, 912.

⁴² *Ibid.*, p. 1045.

THE JOURNAL

OF THE

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EDITORIAL

IF YOUR A.M.A. JOURNAL IS MISSING*

Recently the Executive Office of the Society
has received a number of telephone calls from
members asking the question, "I haven't been
receiving the J.A.M.A. for the last few weeks.
I sent in my check for \$25 for A.M.A. dues on
such-and-such a date. What has happened?"

Investigation reveals that these calls usually
are from members who did not pay their 1950
A.M.A. dues by the deadline date of Decem-
ber 31, 1950, and who have since sent in their
checks for 1950 on—say—January 15, 1951.

* (Reprinted from New York Medicine, official publica-
tion of the Medical Society of the County of New York,
March 20, 1951.)

What has happened is quite simple. When
the 1950 dues were not paid by the end of the
year the doctor entered the category of delin-
quent membership in the A.M.A. His name was
removed from the roster of members and his
name was removed from the list of those who
received the Journal of the A.M.A.

Such delinquent members will not be entered
on the circulation list of the Journal of the
A.M.A. until they have been reinstated to full
membership. This means they must pay BOTH
their 1950 and 1951 dues. If they have now
paid their 1950 dues (after January 1, 1951)
they must also pay the 1951 dues before they
enter status of member in good standing. Until
then they will not receive the Journal.

Word direct from the A.M.A. is that members
who paid their 1950 dues on time (before the end
of the year 1950) are in good standing and have
until the end of 1951 to pay their 1951 dues.
They are considered as 'good circulation risks'
and will continue to receive the Journal during
1951 even if they cannot pay their 1951 A.M.A.
dues until later this year.

BUT members who did not pay their 1950 dues
on time are now delinquent. They are not con-
sidered good circulation risks and the Journal
will not be sent to them until they enjoy full
reinstatement by paying both 1950 and 1951
dues.

It was explained in the circular which accom-
panied the bills for A.M.A. dues that both 1950
and 1951 dues must be paid. The penalty for
those who did not read this, did not believe it,
or did not act upon this advice is the penalty
of not receiving the Journal of the A.M.A.

When a member pays his full dues and is rein-
stated in the A.M.A. his subscription to the Jour-
nal will start again. And the reinstated member
can write directly to the Office of the J.A.M.A.
and ask for back copies that he has missed.

We are informed that the Journal printed a
number of extra copies of the early issues of
1951 to cover just this possibility. But the extra
supply is limited and there can be no guarantee
that the supply will not be exhausted.

To repeat the main point:

A.M.A. members who paid their 1950 dues
during 1950 have no need to worry. Their
J.A.M.A. will keep coming to them throughout
the year. But they must pay their 1951 A.M.A.
dues during 1951, quite naturally.

Members who have not paid their 1950 A.M.A.
dues until after January 1, 1951 are temporarily
NOT receiving the Journal and this is one of
the penalties they pay for being delinquent.

GRIEVANCE COMMITTEES

Some misunderstanding exists on the purpose and function of "grievance committees" which have been generally appointed by state medical societies. Such a committee is now functioning in Arkansas. Formation of these committees has been recommended to serve as a group for discussion of the differences which may arise between patients and physicians. There is no intent that these committees are primarily disciplinary bodies. In the main the committees have considered the matter of fees and have fortunately been able, in practically all instances, to satisfactorily clear up the differences which have arisen on this subject. Our committee has handled cases received for its attention with diplomacy and has seen no need for action of a disciplinary nature.

This committee gives the patient an opportunity to present his grievances, to hear discussion, and to be properly advised. Many misconceptions exist in the mind of the public regarding medical practice. These can be explained by a group so established for the purpose. At this same time the practicing physician may obtain valuable information on some of his patient's problems of which he has no knowledge. Basing its actions upon the premise that misunderstanding or absence of proper information is the cause of grievances, the committee has a welcome opportunity to improve the public relations of the medical profession.

ARKANSAS' FIRST RURAL HEALTH CONFERENCE

Members have been advised of the First Arkansas Rural Health Conference to be held at the Marion Hotel, Little Rock, August 9th and 10th. Sponsored by the Arkansas Medical Society at the suggestion of President Henry, the aims and objectives of the meeting will be furthered by the joint participation of the Extension Service, University of Arkansas, the Council of Home Demonstration Clubs, the Farm Bureau Federation, the Arkansas State Dental Association and the Woman's Auxiliary, Arkansas Medical Society.

The conference plans to assemble civic leaders and physicians for a critical evaluation and discussion period on the problems of rural health in Arkansas, assessing present facilities and determining future progress in the effort to make

medical care readily available to all citizens of Arkansas.

President Henry urges the fullest attendance of Society members and requests that they bring civic leaders from their communities to the sessions. He has stated: "We are, in a measure, on trial. The farm groups participating represent the greatest share of our population. They will carry back to their communities their impressions of the sincerity of our promises. We must, by our attendance and participation in the meeting, prove that we intend to follow up our brave words with real planning and action."

You should attend!

RANDOM THOUGHTS OF THE SECRETARY

July 4th. Once again it is time to "proclaim liberty throughout the land" and may we all fully recognize that we can perpetuate liberty for ourselves and for our children if we will but continue to seek it.

July 12th. Tonight pleased to meet with the Pope-Yell group who maintain interest and enthusiasm in organized medicine in a most encouraging manner, setting a pattern now by assuming medical society leadership in school examinations. Later over the remodeled Saint Mary's, a happy institution now, and then by the Millard-Henry offices and on homeward with the affable orthoped, Gross.

July 13th. One would think that a thinking leadership would at long last have learned that in dealing with Communists, nothing is assumed, and the presence of armed guards and denial of press attendance is naught but what is to be expected when the conditions of meeting are not spelled out.

July 16th. Personal to Sid Wrightsman: As you today take over in an opportunity to further serve the public and the profession of Georgia we offer our appreciation for your loyalty and enthusiasm to this Society and shall watch your progress in this larger field confident of your happiness and success.

July 16th. With Hawkins, Gross pater and fils and one other whose name we can not now recall, to Lake Greenleaf to renew old acquaintance with the eastern Oklahoma group in a happy session and away on a cool moonlight night, our reveries interrupted by the wail of the Sallisaw police siren, which Hawkins answers with apologetic words and with a lighter accelerator foot for the rest of the homeward trip.

July 17th. Now it comes to us: the other fellow in the car last night was Goldstein.

July 19th. Dining with Heine who brought good food to Springdale and down along US 71 with the moon topping the ridges with soft golden beams and touching the highway with soft pleasant glow beckoning on south as cool breezes fan through the open car windows the all making a night for reveries.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

PNEUMOPERITONEUM IN TB TREATMENT

KIRBY S. HOWLETT, JR., M. D.

The NTA Bulletin, March, 1951

The present era is replete with major innovations in the treatment of tuberculosis yet pneumoperitoneum continues to provoke the discussion and controversy usually accorded a newcomer. First employed for the treatment of intestinal tuberculosis, then largely abandoned, pneumoperitoneum was subsequently recommended by Banyai for treating pulmonary tuberculosis almost 20 years ago. Experience has not yet defined the legitimate place of pneumoperitoneum among our therapeutic resources. Therapeutic pneumoperitoneum is produced by the installation of air through a needle into the abdominal cavity much as air is introduced into the chest by pneumothorax. This air fills the space which surrounds the abdominal organs and which is separated from the contents of the thoracic cavity by the diaphragm.

In pneumothorax the object is to produce relaxation of a tuberculous lung by the action of the air which surrounds it and allows the lung to collapse. In pneumoperitoneum, also, the object is relaxation of a diseased lung. Here, however, the air does not act directly upon the lung but acts upon the diaphragm, increasing the pressure beneath it which causes it to rise higher in the chest. This reduces the size of the thoracic space and the lungs retract to a smaller size and relaxation results.

The diaphragm is fixed at its periphery and is composed largely of a sheet of muscle covered on the chest side with pleura; on the abdomen side, with peritoneum. Its resistance to stretching can be markedly diminished if the muscle of the diaphragm is paralyzed by crushing the phrenic nerve in the corresponding side of the neck. Hence, phrenic paralysis is often used in combination with pneumoperitoneum. Even the unparalyzed diaphragm can usually be stretched sufficiently to relax the overlying lungs to some degree, although this varies considerably in different patients.

In discussing therapeutic pneumoperitoneum, comparisons with therapeutic pneumothorax inevitably arise. Neither involve the immediate trauma and shock of thoracoplasty and pulmonary resection. Hence, either pneumothorax or pneumoperitoneum can often be applied where bed rest alone is inadequate but where major surgery does not appear suitable.

Both pneumothorax and pneumoperitoneum can be administered with reasonable hope that the collapse effect produced by them will remain subject to the control of the physician and that the collapsed lung will return to its pre-treatment size and function when treatment is terminated. Unfortunately, this hope is all too often unfulfilled.

In the period from 1930 to 1940, pneumothorax was regarded as the best form of collapse therapy for the vast majority of patients. Thoracoplasty was rarely employed except after an unsuccessful pneumothorax and resection of a tuberculous lung was deemed too hazardous. Pneumothorax was, however, impossible in many patients because the diseased lung was adherent to the chest wall. Complications were frequent and some of these were more serious than the pulmonary tuberculosis itself. Certainly the over-all results from widespread use of pneumothorax were disappointing. This led some clinics to avoid pneumothorax in all but exceptional circumstances; others continued to use it readily, but with much greater discrimination.

The decline in the use of pneumothorax has been accompanied by an increase in the use of pneumoperitoneum. Pneumoperitoneum enjoys the obvious advantages of a temporary and reversible collapse measure without many of the disadvantages of pneumothorax. Experience with pneumoperitoneum has demonstrated that, in competent hands, it is a relatively safe and well-tolerated procedure, and is capable of favorably influencing the course of pulmonary tuberculosis in many cases.

Up to this point, agreement among tubercu-

losis physicians is fairly uniform. Beyond this point, one encounters markedly divergent opinions and claims. The difficulty of evaluating a therapeutic procedure in a disease as protean in its manifestations and as variable in its behavior as pulmonary tuberculosis has long been recognized. Data from the prolonged observation of patients treated with pneumoperitoneum are still rather limited. Nevertheless, present evidence appears to justify certain conclusions.

The advantages of pneumoperitoneum are most apparent in the treatment of patients with acutely active tuberculosis who are too ill for immediate thoracoplasty or resection and in whom complications from pneumothorax are excessive. Pneumoperitoneum is especially valuable as a means of producing sufficient improvement to prepare such patients successfully for major surgery. Modern chemotherapy has lessened the need for pneumoperitoneum in this particular role but it is sometimes advantageous to use both pneumoperitoneum and chemotherapy.

Also, a temporary collapse measure is still widely preferred to major surgery for the treatment of patients in whom the extent of disease and of pulmonary damage is limited, although the increasing number of successful results from the localized resection of tuberculous lesions may radically alter this attitude. Pneumoperitoneum provides such a temporary collapse. The advantages of increasing the effectiveness of pneumoperitoneum by adding phrenic paralysis must be weighed against the permanent functional impairment which frequently results from the combination.

Neither pneumoperitoneum nor pneumothorax is likely to prove effective in patients with extensive destruction of lung tissue. When the function of a lobe or of a lung has already been impaired by destructive tuberculosis, the damage is irreversible. Therefore, unless the patient is a poor surgical risk, it is unwise to elect pneumoperitoneum for such lesions instead of the ultimately more effective and more durable thoracoplasty or resection.

While modern surgery and modern chemotherapy have reduced the indications for temporary collapse of a lung, the need has not been eliminated. Many physicians still prefer pneumothorax for this purpose, but pneumoperitoneum can be employed even when pleural adhesions prevent satisfactory collapse by pneumothorax.

Moreover, pneumoperitoneum can be employed with safety where the hazards of pneumothorax are excessively high. The results from pneumoperitoneum are sometimes definitive; at other times it produces sufficient improvement to make definitive surgical therapy feasible. Finally, pneumoperitoneum may produce improvement—though not often a cure—in patients with extensive disease in both lungs and with poor respiratory function who are unable to tolerate any other form of collapse therapy or surgery. It is extremely important that the limitations of pneumoperitoneum be recognized. However, its value in the treatment of certain types of pulmonary tuberculosis has been clearly established.

WOMAN'S AUXILIARY NEWS

The Pope-Yell County Medical Society Auxiliary held its July dinner meeting in the home of Mrs. Anna Henry, Russellville, Arkansas. Mrs. Max Mobley, president, presided over the meeting, at which nine members were present. The July project consisted of gathering up flower vases for donation to St. Mary's Hospital, Russellville. As its project for August, the organization voted to give to the same hospital a supply of children's hospital gowns, made from gaily printed material. Also, plans were made to support the campaign sponsored by the Woman's Auxiliary of the Arkansas Medical Society in purchasing books for the patients' libraries at the Arkansas Tuberculosis Sanatorium and the McRae Memorial Sanatorium.

Mrs. William Henry,
Secretary-Treasurer.

OBITUARY

MELVIN E. McCASKILL, age 70, Little Rock, died July 9th. A graduate of Saint Louis University in 1905, he had practiced in Little Rock for 45 years. Active in medical organization he had served as president of the Pulaski County Medical Society, as councilor and president of the Arkansas Medical Society, as member and as chief of staff of the Baptist State Hospital, as a member of the staff of St. Vincent's Infirmary and was assistant professor of gynecology at the University of Arkansas School of Medicine. Surviving him is his son, Dr. Melvin R. McCaskill, of Little Rock.

PERSONALS AND NEWS ITEMS

Dr. and Mrs. L. K. Hundley, Pine Bluff, attended the recent convention of Rotary International in Atlantic City.

Dr. and Mrs. Chas. S. Lane, Fort Smith, spent a recent vacation in Mississippi.

BORN—On June 29th, a son, David Allen, to Dr. and Mrs. S. W. Hawkins, Fort Smith.

F. Walter Carruthers, Little Rock, announces the association with him in the practice of orthopedic surgery of Richard M. Logue.

Major James P. Jernigan, Little Rock, is now on active duty at F. E. Warren AFB, Wyoming.

Dr. and Mrs. Ken Thompson, Fort Smith, spent a recent vacation in Florida.

D. A. Dickerson has moved from Marked Tree to Parkin.

"Unusual Gastrointestinal Fistulae" by John D. Olson, Fort Smith, appeared in *The American Surgeon*, April, 1951.

Gilbert O. Dean has opened offices for the practice of general surgery including chest surgery at 222 Donaghey Building, Little Rock.

J. D. Kinley has been elected surgeon of the Beebe post, American Legion.

Dr. and Mrs. W. J. Schwarz, Little Rock, spent a recent vacation at Eureka Springs.

Sid Wrightsman assumed duties as executive secretary of the Medical Association of Georgia at Atlanta on July 15th.

Dr. and Mrs. H. Fay H. Jones, Little Rock, spent a recent vacation in Hawaii.

Dr. and Mrs. O. C. Melson, Little Rock, spent a recent vacation in Michigan.

F. Walter Carruthers, Little Rock, addressed the Benton-Bauxite Rotary club July 9th on "The Trend of Our Times."

The following were registered at the Atlantic City session of the American Medical Association: C. C. Ault, Little Rock; W. R. Brooksher, Fort Smith; Willis E. Brown, Little Rock; G. E. Cannon, Hope; Raymond Cook, Little Rock; R. E. Crigler, Fort Smith; Eva F. Dodge, Little Rock; Ellery C. Gay, Little Rock; D. W. Goldstein, Fort Smith; Milton C. John, Stuttgart; C. P. Klein, Texarkana; D. C. Lee, Hot Springs National Park; W. R. Lee, Hot Springs National Park; Jerome S. Levy, Little Rock; H. E. Murry, Texarkana; John D. Olson, Fort Smith; A. E. Parks, Fordyce; Norman W. Peacock, Ashdown; A. R. Power, Hot Springs National Park; L. D. Reagan, Little Rock; D. A. Rhinehart, Little Rock; Fount Richardson, Fayetteville; R. B. Robins, Camden; E. L. Rushia, Little Rock and J. M. Sheppard, El Dorado.

Dr. and Mrs. A. S. Koenig, Fort Smith, spent a recent vacation at Saint Petersburg, Florida.

J. B. Martindale, Hope, and M. C. Berry, Malvern, have been appointed part-time maternal and child health clinicians for the Arkansas State Board of Health.

Louis Webb and W. C. Hays have been elected surgeons of the American Legion posts at Dardanelle and Marianna respectively.

Alan G. Cazort announces the association of Thomas G. Johnston with him in the practice of allergy at 1425 West Seventh Street, Little Rock.

A. S. J. Clarke, R. G. Kramer and W. R. Brooksher, Fort Smith, conducted a diagnostic cancer clinic at Ozark June 20th under the sponsorship of the Franklin County Medical Society and the Franklin County Division, Arkansas Cancer Society.

"Magic as a Doctor's Hobby" by John McC. Smith, Little Rock, appeared in *G P* for June, 1951.

"Electrocardiographic Studies of the Effect of Histamine on the Cardiac Mechanism" by L. H. Crip, Pittsburgh, and William K. Riley, Pine Bluff, appeared in the *American Heart Journal* for March, 1951.

Dr. and Mrs. C. W. Hall, Greenwood, spent a June vacation in California.

Speakers before the Atlantic City session of the American Medical Association were Henry G. Hollenberg, Little Rock, "Bleeding from the Nipple," and Vida H. Gordon, Little Rock, "Infantile Eczema: Management in Pediatric Practice and Prophylactic Measures for Future Allergic Disease."

R. B. Robins, Camden, addressed the Jackson County Medical Society, Kansas City, at its installation luncheon June 29th on "Changes in Medical Practice."

Dr. and Mrs. Robert Thompson, Fort Smith, spent a recent vacation in Saint Louis.

Dr. and Mrs. J. B. Stewart, Fort Smith, spent a recent vacation on the Texas Gulf coast.

Harry Hayes, R. E. McLochlin and Alfred G. Kahn, Little Rock, attended the recent meeting of the medical section, American Life Convention, at Colorado Springs.

R. G. Carnahan, Little Rock, has qualified as a diplomate of the American Board of Psychiatry and Neurology.

Dr. and Mrs. T. L. Adair, Bald Knob, spent a recent vacation in Florida.

James H. Growdon, Little Rock, has been appointed professor and head of the department of surgery, University of Arkansas School of Medicine.

Ellis Gardner and W. O. Young have been elected president and vice-president, respectively, of the Russellville Rotary club.

W. H. Pruitt, formerly of Mountain Home, has opened an office for practice at Clinton.

MARRIED—On July 3rd, Miss Delphine Marie King and Jean Carl Gladden, Harrison.

Sam Phillips, Little Rock, recently took post-graduate work in pediatrics at Harvard Medical School and at Massachusetts General Hospital, Boston.

Lewis M. Henry, Fort Smith, attended the

Ophthalmologic Study Council at Portland, Maine, during June and July.

PROCEEDINGS OF SOCIETIES

The Greene-Clay County Medical Society met at Paragould June 13 for dinner and the showing and discussion of two films on early detection of cancer, currently being loaned for this purpose by the Arkansas Division of the American Cancer Society. The 16 mm projector used in their presentation was presented to the hospital by the medical staff for teaching purposes and accepted for the hospital by the superintendent of nurses.

Prof. J. W. Ramsey, Fort Smith, addressed the Sebastian County Medical Society June 12th on "History and Functions of the Joint Committee on Health of the National Educational Association and the American Medical Association."

Art B. Martin, Secretary.

The Pope-Yell County Medical Society was addressed July 12th by W. M. Gross, Fort Smith, "Low Back Pain," and by W. R. Brooksher, Fort Smith, "Roentgenology of the Gastrointestinal Tract."

W. O. Young, Secretary.

A. C. Curtis addressed the Lawrence County Medical Society July 10th on tuberculosis.

Chas. D. Tibbels, Secretary.

The annual Washington-Benton County Medical Society picnic was held at Lake Atalanta, Rogers, July 12th, with Fred Harris, Little Rock, guest speaker.

Lee A. Dean, Secretary.

BOOK REVIEW

Clinical Laboratory Methods. By W. E. Bray, B. A., M. D., Professor of Clinical Pathology, University of Virginia, Director of Clinical Laboratories, University of Virginia Hospital. Fourth Edition. Price, \$7.50, Pp. 614, with 119 text illustrations and 18 color plates. The C. V. Mosby Company, St. Louis, Missouri, 1951.

Bray's Clinical Laboratory Methods has, for many years, been a standard book in every laboratory library. It has received wide usage because of the clear, precise man-

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RESEARCH IN THE
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ner in which the material is presented and the comprehensive scope of its contents. Therefore, the revised fourth edition should be welcomed by all laboratories and persons interested in clinical pathology. Recent additions in the new edition consist of a thorough but brief presentation of laboratory procedures involving the Rh factor, bone marrow studies and a summary of the usage and control of antibiotics. The new nomenclature of hematology is used throughout the new edition which is gratifying for hematologists who have long needed a standard nomenclature, and it is hoped that soon it will be used in all other publications on hematology. New charts and graphs are included in the fourth edition. The color plates, particularly of the blood cells, are rather poor and do not accurately portray the microscopic appearances which they are supposed to represent. On the whole, the volume continues to be a valuable one to be included in the laboratory library.

Immunology. By Noble Price Sherwood, Ph. D., M. D., F. A. C. P., Professor of Bacteriology, University of Kansas. 3rd Edition. Saint Louis: C. V. Mosby Company, 1951. Price, \$8.00.

The publication of a book dealing with immunology fills a void that has existed for several years.

The author states in his preface to the first edition that the book was written for medical students and for others who are interested in the underlying principles involved in infection, resistance and diagnostic laboratory tests. In his preface to the present edition, he states that emphasis has been placed throughout the book on the changing points of view relative to natural and acquired immunity and allergy. Among the new topics discussed are the new blood factors, latent infections, mechanism of viral infection, the role of the vertebral veins in metastasis and the new concepts relative to the role of vitamins and endocrines to resistance. In general, the book has accomplished the author's purpose to a remarkable degree. The scope of the material is great and, of necessity, the depth of treatment is somewhat limited but is adequate for the needs of the medical student. The author has succeeded in presenting a comprehensive review of developments in the field of immunology at the same time maintaining relative brevity as compared to other works dealing with this subject. A voluminous bibliography compensates for the brevity of the treatment of the material. This bibliography will be especially useful to those other than students who are interested in some particular phase of the field covered by this work. The instructor of immunology will find it necessary to elaborate on many of the subjects covered in this book, a circumstance which will not be objectionable from the teacher's point of view since the situation eliminates that feeling of futility of presenting before a class material that has been much more effectively said in a text book.

On those subjects which are controversial the author has made an admirable success of presenting both sides of the issue but has perhaps been a little modest in expression of his own opinions. The present volume presents a vast improvement over the first edition, issued in 1935.

Physical Examination in Health and Disease. By Rudolph H. Kampmeier, A. B., M. D., Associate Professor of Medicine, Vanderbilt University School of Medicine; Visiting Physician to Vanderbilt University Hospital; Chief of the Medical Outpatient Service, Vanderbilt University Hospital, Nashville, Tennessee. 550 Illustrations—one in color. F. A. Davis Company, Phila-

delphia, 1950. Price, \$8.00. Pages 821.

A text that was written primarily for the teaching of the fundamentals of the physical examination to the medical student. The author presents this by arranging the normal findings and technic of examination of each region in one chapter and follows this with a chapter describing the abnormal findings and correlating the pathological changes. There are a number of fine illustrations throughout the book to further acquaint the student with the material discussed. The use of this text will be largely confined to the undergraduate student.

Natural Childbirth: A Manual for Expectant Parents.

By Frederick W. Goodrich, Jr., M. D., Pp. 176. Price, \$2.95. New York: Prentice-Hall, Inc., 1950.

This is written for expectant parents but emphasizes so-called "natural childbirth." It is optimistic and it is probable that physicians not handling their obstetrical cases according to the principles advocated will experience considerable difficulty with readers of the book.

Handbook of Medical Management. Second Edition. By

Milton Chatton, A. B., M. D., Instructor in Medicine, University of California Medical School, San Francisco. Sheldon, Margen, A. B., M. D., Clinical Instructor in Medicine, University of California Medical School, San Francisco. Henry D. Brainerd, A. B., M. D., Assistant Clinical Professor of Medicine and Pediatrics, University of California Medical School, San Francisco; Assistant Clinical Professor of Pediatrics, Stanford University School of Medicine; Physician in Charge, Isolation Division, San Francisco Hospital. University Medical Publishers, Palo Alto, Calif. 508 pages. Price, —. 1951.

Present revision of edition published in 1949 has been brought up to date with the inclusion of new therapeutic measures including ACTH and cortisone, vitamin B12 etc. Written as a handbook for the medical student and practitioner for therapeutic procedures to be followed after the diagnosis has been made. Devotes only a resume of steps to be followed in diagnosis of the different diseases with no discussion. Manual is divided into chapters on diseases of each system with an easy to use rapid index that adds much to the value of the book. Will be found to be of great value to the practitioner in the conduct of his daily practice.



SEP 13 1951

San Francisco, 22

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*
Hamblen, E. C.: Some Aspects
of Sex Endocrinology
in General Practice,
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OTOLARYNGOLOGY, YESTERDAY, TODAY, AND TOMORROW*

(Chairman's Address)

PAUL L. MAHONEY, M. D.
Little Rock

Otolaryngology is one of the oldest specialties, and we have every reason to be proud of its history and accomplishments, but Otolaryngology as we know it today is a fairly new field. The Board of Otolaryngology was founded in 1924 and since that time has made great advances. Many of the unsolved problems of yesterday have been solved, but there are far too many remaining to ever imagine this field becoming dull and uninteresting.

Otolaryngological training in the early days was difficult to obtain. For the most part, courses were offered in various institutions for very short periods ranging from two weeks to several months. The better trained specialists received their training in a difficult and unorganized manner, reviewing their work in the basic sciences, working in clinics, and preceptorships. The hospital facilities and instruments of today were only dreams of yesterday. In Peroral Endoscopy there was a course given in one of the larger cities. This course was for a period of two weeks at the end of which time you were told that you were not a peroral Endoscopist and that you had only received a formal introduction to this field of endeavor. Never, could a statement have been more true. The only way any degree of skill could hope to be obtained was by studying, practicing many hours on a manikin, carefully studying each case before instituting any mechanical procedure, analyzing your mistakes, and worrying about them until you were certain that they would not be repeated.

To reminisce for a few seconds—I can remember instances that made me very sad, and then again many that brought much happiness to my heart. Each year I could look forward with a

great deal of anguish to seeing children choking with laryngeal diphtheria. Most often, these calls came during the night hours. There were no hospital provisions to care for these little patients and the establishment of an air way was often an emergency. A tracheotomy was not even to be considered. So there you were, usually on the outskirts of the city, in a small home with no assistance other than a mother, grandmother, or a father, and an intubation was the only choice of treatment. (Intubation, now, is virtually, a lost art). In almost every instance you were the physician, the nurse, and the comforter. The mortality was very high and in proportion to the age of the child. Few lives were saved in children under eighteen months of age. Diphtheria could be comparable to a thief sneaking quietly into a home and giving little, if any, warning, of the severity of the illness. Too bad compulsory immunization was not a law. (I did my best to make it so and also to have beds provided for the treatment of these poor, little, unfortunate children, but to no avail.) Closing my eyes and looking back, it was a nightmare.

Nasal surgery was in the state of trial and error, and too many trials with poor results created the expression (often heard even today) "One sinus operation means another." Many types of instruments and operative procedures filled the literature. Surgical techniques seemed to be more important than knowledge of pathology. Rhinoplastic surgery was crude and the results obtained by the best in this field were none too good. The Otolaryngologist knew that he should be best qualified to do this type of surgery, but lack of time, and of places where this training could be obtained, forced the Otolaryngologist to refer these patients to the general plastic surgeon.

What today is known as nasal allergy and vasomotor changes was then labeled sinusitis, and virtually always confirmed by X-ray evidence of sinusitis. The treatment that the patient received was often surgical, and too often radical surgery. As stated, knowledge of physiology and pathology was secondary to surgical skill.

Thyro-glossal duct cysts and other congenital

* Read before Section on Eye, Ear, Nose and Throat, 75th Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

cysts of the neck were referred to the general surgeon. Again, the Otolaryngologist, of those days was a very busy physician, and lack of training in surgery of the neck accounted for these referrals. Neck abscesses, especially Ludwig's angina, and abscesses in the pharyngomaxillary fossa were not uncommon. Many articles dealing with the etiology and surgical treatment found their way into the literature. Too many Otolaryngologists were not aware of the severity and complications of abscesses located in the pharyngomaxillary fossa and too often waited for fluctuation to make its appearance before surgical intervention was instituted. There was an old saying in those days that fluctuation and rupture usually occurred several days after the autopsy. Peritonsillar abscesses were also much more common than is seen today in general practice. I could continue to reminisce, but it not only makes me feel too old, but also it is now time to consider the Otolaryngologist of today.

The field of endeavor of the Otolaryngologist of today has been markedly narrowed for many reasons. Not because of soil erosion for the men in this field today are much better qualified to cultivate the soil of our specialty than in the days that have passed. I am confident that each of you is familiar with the causes, and I will enumerate only a few. There are many more hospitals in the State affording a place and an opportunity for well trained young physicians to medically and surgically treat their patients. A questionnaire prepared by Dr. Lierle and sent to five hundred and seventy-four general practitioners in Iowa showed that from one and one-half to eighty percent of their work was in the field of Otolaryngology. The average was about twenty-two percent. In most instances now, undergraduate and graduate training includes better than fair instruction in Otolaryngology. Many of the tonsillectomies that yesterday fell into the hands of the specialist now are done by the general practitioners. Antibiotics have done to our field what the boll weevil too often has done to the farmer and his cotton. Through this type of therapy there has been a tremendous diminution in the complications of upper respiratory infections, acute otitis media, acute mastoiditis, lateral sinus thrombosis, brain abscesses, meningitis (it was said that meningitis of otitic origin was the saddest chapter written in the book on Otolaryngology), and cavernous sinus thrombosis, (always a fatal complication). Abscesses in the neck were frequent and not at all uncommon as they are today.

The development of the specialty of chest

surgery has further restricted our field, and the end is not yet in sight. The chest surgeon has found it necessary, he thinks, to include a bronchoscope among his diagnostic tools. Really, the chest surgeon should work with the Otolaryngologist. There are not many chest surgeons equipped to do this type of work. Certainly, they are not equipped to remove foreign bodies from the food and air passages, and it only means inferior examinations in many instances and a duplication of instruments. The continuous use of bronchoscopic instruments naturally increases the skill of the operator and makes for safer and better removal of foreign bodies in children.

Immunization has played its part in preventing many diseases and also their complications which we were called upon to treat.

Beginning today and continuing into tomorrow, the Otolaryngologist will enter the scene, and he might be difficult to recognize, for he will have undergone a complete face lifting. If not, then these questions must be answered. Should this field be abandoned or should the field be further cultivated and the crop diversified? This meaning, that through proper training, taking back into our field that which should have originally been ours.

Dr. Wesley M. Hunt thinks that the Department of Otolaryngology should be independent or autonomous from an operational standpoint. The scope of training should include training in oral surgery, plastic surgery, (as pertains to our specialty) neck surgery, bronchoesophagology, allergy, Pediatric otolaryngological training, and fundamentals of surgery. Dr. Lierle states that there has been considerable controversy during the last several years as to who should do plastic surgery in Otolaryngology. He thinks that it is perfectly logical for an Otolaryngologist, Ophthalmologist, General Surgeon, or Urologist to do his own plastic surgery provided that he has the ability and has had adequate training in his field. He further states, and I agree, that his training should go beyond the usual residency. There is now (and was not just a few years ago) ample opportunity for men to receive training in plastic surgery in their own fields.

In Dr. Lederer's article "Otolaryngology, What Are Its Restrictions and Where Are Its Borderlines?" he states the results of a discussion which concerned the Dean of a large medical school, the Head of the Department of Surgery, and the Head of the Department of Otolaryngology. The purpose was to settle those departmental difficulties wherein there seemed to be

an overlapping of activities. He made it clear, however, that his own opinion was that recognition should be based upon training, experience, and ability of persons engaged in any endeavor. The head of surgery felt that Otolaryngologists impelled by restrictions of operative intervention caused by hemo-therapeutic and antibiotic drugs had felt the need suddenly to expand his activities by invading the field of general surgery. He included plastic surgery and neoplasms, with neck surgery as the main areas of expansion. The head of Otolaryngology brought out in this conference the fact that fifty-five percent of all neoplasms encountered in the tumor clinic are of the head and neck. He states that most tumors (malignant) of the neck have their source in the pharynx and nasopharynx. Is not the Otolaryngologist by training and experience the logical person to treat these neoplasms? Is the Gynecologist, the Orthopedist, the Neurosurgeon, expected to relinquish tumors in their respective anatomical fields to the General Surgeon? The General Surgeon will, without reluctance, allow that the Otolaryngologist perform a laryngectomy, an admittedly formidable procedure. Yet, the General Surgeon questions the right of the Otolaryngologist to operate a thyro-glossal duct cyst which traverses the hyoid bone, a pharyngeal diverticulum, removal of a submaxillary gland, and numerous other procedures. I would ask, should the physician who designates himself as a General Surgeon be the Land Owner who outlines who should be permitted to say how many fields of surgery there should be, to draw an imaginary line of separation, to say who shall work in them. Overlapping of the specialties is inevitable, and proper training and ability should determine where a specialist's field ends.

The training that the caretakers of the field (Otolaryngologists) obtain in most recognized institutions today is such that diversification of his crop will not be too difficult. He will emerge with a good knowledge of otoplasty, rhinoplasty, peroral endoscopy, maxillo-facial, neck surgery, and otolaryngological pediatrics that will enable him to take back into his field that which rightfully belongs to him, that which he is more thoroughly trained to cultivate, that which in the past he was too busy to care for, or given an opportunity to cultivate his knowledge and skill. He is spoken of as a child giving away his choice toys and now, in a moment of despair, crying to have them returned.

Now, there are in the United States at least thirty-four training centers for the teaching of

Otolaryngology and Ophthalmology. This combined training, I think should be encouraged for in the smaller centers there is a great need for this type of combined specialization, while in the larger centers the combination must be patterned to fit the specific environment. Realizing this, we have in recent years made an intense effort to improve our knowledge and ability to the extent where we now feel capable of making a fair bid to have these additional entities referred to us for examination and indicated treatment. I think that economic reasons will bring forth the diversification that I have spoken of. If not, I feel that the field will become too wet to plow and suffer the danger of abandonment.

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OKLAHOMA CITY CLINICAL SOCIETY

The Oklahoma City Clinical Society which had its beginning in 1930, will open its twenty-first annual four-day Conference October 29, 1951.

A large attendance is expected at this ever increasingly popular meeting held in centrally located and easily accessible Oklahoma City. It is interesting to note that at the present time Oklahoma City is rated third in the nation as a convention city.

As in former years, an outstanding program of postgraduate teaching has been arranged. This includes lectures and discussions by sixteen distinguished guest speakers selected from various medical and teaching centers throughout the nation, as well as many Oklahoma City teachers and physicians. Dr. John W. Cline, President of the American Medical Association, will give an address at the first banquet meeting October 29th. In addition to the general assemblies and panel discussions there will be daily luncheon round table question and answer sessions, and a clinical pathologic conference. The entertainment will include dinner meetings, the annual Clinic Dinner Dance and the Stag Smoker.

A cordial invitation is extended to all physicians who are members of their County Societies to attend this interesting meeting.

CHRONIC INFECTIONS OF THE MIDDLE EAR*

ROBERT H. ATKINSON, M. D.
Hot Springs National Park

During the past few years marked advancement has been made in the prevention of chronic suppurative otitis media and its complications. The decline in new cases being chiefly due to the good results obtained in treating acute suppurative otitis media with early myringotomy and specific anti-biotics as well as the prophylactic use of these drugs in the treatment of infections involving the paranasal sinuses and nasopharynx. The following statistics by Eggstons recorded during the period 1926-1934 vividly illustrate the strides which have been made. Of 363 deaths occurring in the Manhattan Eye, Ear and Throat Hospital 110 were suppurative meningitis, 53 brain abscess and meningitis and 14 brain abscesses; a total of 177 or 48 per cent. Of these 127 or 72 per cent were complications from the auditory apparatus. Fortunately we no longer see reports similar to this. Nevertheless chronic suppurative otitis media is still a big problem, for the incidence in the United States has been estimated at from 2 to 4 per cent of the population.

Chronic otitis media is usually the results of one of the following conditions:

1. Severe middle ear infection causing necrotic changes in some portion of the tympanum. The necrosis may involve the mucosa, the ossicles and the bony walls as well as destroy portions of the tympanic membrane. A marginal perforation resulting from such an infection is the site of an ingrowth of squamous epithelium which proliferates and desquamates to form a cholesteatoma (the secondary type of false cholesteatoma).

2. An acute exacerbation of an otitis media in an individual whose tympanic mucosa is abnormal from otitis media neonatorum or otitis media in early childhood. This type of mucosa is hyperplastic and has poor healing qualities. It is not uncommon to find polyps in this type for healing is attempted through proliferation of granulation tissue.

3. A differential in pressure between the middle ear and the external canal producing an inward pouching of the flaccid portion of the tympanic membrane. The negative pressure within the middle ear may be due to an occlusion

of the eustachian tube or a blocking of the attic by hyperplastic mucosa. The neck of the pouch becomes too restricted to allow escape of the desquamated epithelium, thereby forming a cholesteatoma (the primary type of false cholesteatoma). This type is not at all common.

4. Masking of the signs of an acute otitis media with chemo-therapy followed by a late and chronic flare up after cessation of the medication. Up until 1929 only 146 cases of mastoiditis without preceding otitis media were on record. Now there are numerous cases reported.

The first etiological cause listed ie. severe middle ear infection causing necrotic changes is seldom seen, because the majority of cases of this type were observed as complications of scarlet fever, measles and diphtheria. The second etiological cause should be discussed in more detail since this by far is the most common. Published in 1918 was the work of Karl Wittmaach, on pneumatization of the temporal bone. Normally the temporal bone and especially the mastoid portion is pneumatized. This process begins at birth and should be divided into three periods. The first period extends from birth to the end of the first year or shortly thereafter during which time the tympanum, an attic and antrum are developed. At birth these cavities are filled with embryonal myxomatous tissue covered with cuboid epithelium. The tympanum and attic gradually enlarge as they are filled with air from the eustachian tube. The antrum is the last space formed. By the end of this period the myxomatous tissue has contracted and the epithelium has become low cuboidal. The second period is usually complete by the fourth or fifth year. During this stage the myxomatous tissue from the antrum extends into the surrounding marrow spaces. With this extension the marrow spaces are absorbed and the epithelium from the antrum grows down over the extension of myxomatous tissue. Concomitant with this there is contraction of the myxomatous tissue to form the submucosa, and the cuboid epithelium becomes much thinner. In this manner the mastoid cells are formed and pneumatization is complete. In the third period, which extends from the fifth year throughout life, there is a formation of small pneumatic spaces communicating with the larger spaces formed during the second period.

With these three stages or periods in mind the age of the individual at the time of the initial middle ear infection and the severity of the infection are most important. If infection takes place in infancy or before the end of the

* Read before Section on Eye, Ear, Nose and Throat, 75th Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

fourth or fifth year, pneumatization is definitely disturbed; resulting in no pneumatization if the infection is early and of a severe type, or partial if the infection takes place after the normal pneumatization has begun.

The signs and symptoms of chronic otitis media are not complex. The character of the discharge quite often may indicate the type of pathology present. The foul smelling, grayish-yellow discharge suggest cholesteatoma and invariably so if a marginal or attic perforation is present. Also small, white, shiny, greasy flakes in the discharge indicate cholesteatoma. In some cases the discharge is mucinous and only becomes thick and purulent at intervals. Of course the presence and position of the tympanic perforations is of importance; the marginal and attic perforations are associated with cholesteatoma. Multiple perforations suggest a tuberculous infection, and a small central perforation in the antero-inferior quadrant may indicate pathology limited chiefly to the eustachian tube. Large central perforations with granulations filling the middle ear with or without necrosis of the ossicles are often associated with a poorly pneumatized mastoid, because of the long standing infection. It is in this type that polyps are found and not infrequently will have filled the external auditory canal before the patient seeks medical aid. The amount of hearing loss is related to the degree of involvement of the ossicular chain, and the round window. The degree of perceptive deafness being directly related to the duration of the infection with absolute deafness indicating that there has been some labyrinthitis. A hearing loss of around 30 to 40 decibels usually accompanies the large perforations with granulations of the promontory. A hearing loss of 50 to 60 decibels or more may be present in those cases with a marginal perforation and an odorous secretion. Pain in chronic suppuration of the middle ear is not common and when present is usually the result of increase in tension because of the stoppage of the discharge. When pain is present one should not procrastinate, for it may also be the symptom of an early epidural abscess or intradural complication. Tinnitus varies in severity, but has little prognostic value. Vertigo is of significance and is a serious symptom. Intermittent attacks in the presence of a positive fistula test is diagnostic of an erosion of the bony labyrinth. Persistent vertigo with nystagmus are the signs of an active labyrinthitis.

The complications of chronic suppurative otitis

media will be very briefly discussed under seven headings:

1. Brain abscess—some statistics have run as high as 85 per cent of brain abscesses occur in chronic infection of the middle ear. The pathway of infection is by one of the following routes:

- (a) perivascular infiltration
- (b) continuity of tissue
- (c) by way of thrombophlebitic blood vessels
- (d) or by way of arteritis.

The initial signs of a brain abscess are:

- (a) generalized or Jacksonian seizures
- (b) severe headache
- (c) slow cerebration
- (d) apathy
- (e) confusion
- (f) slow pulse

The formation of a cerebellar abscess is usually an intracranial spread from an acute labyrinthitis.

2. Meningitis may result from an extension through the lateral sinus, from an epidural abscess, from petrositis, or through labyrinthitis. The symptoms of sustained fever, headaches, vomiting, a stiff neck, etc., indicate the diagnosis.
3. Epidural abscess occurs when the middle ear suppuration erodes the inner plate. There may be only a small dehiscence or the necrosis of the bone may be extensive. The pus collects between the inner plate and the dura accompanied by a localized area of meningitis. The only symptom may be headache.
4. Thrombosis of the lateral sinus is usually preceded by a peri-sinus abscess which in turn produces a phlebitis. The blood stream is slowed, involvement of the inner wall of the vein results in a mural change and in time the lumen may be completely occluded. Sinus thrombosis is diagnosed by repeated remissions and sudden rises of temperature associated with headache. There may be a positive blood culture. The Tobey-Ayer syndrome is strongly indicative of sinus thrombosis, but may be caused from compression of the sinus or jugular bulb by an abscess.
5. The classical sign of petrositis are, of course, paralysis of the abducens nerve (6) which innervates the external rectus muscle associated with severe temporal pain (Gradenigo's syndrome). With involvement of the tip cells of the petrous there may develop perior-

bital pain which is severe and described by the patient as "pain behind the eye."

6. Facial paralysis may develop at anytime and is usually sudden with all branches being involved. Occasionally a cholesteatoma in the petrous apex will produce a slowly progressing, painless facial paralysis. There is little hearing impairment which differentiates this from an acoustic neuroma where the hearing loss develops before the facial paralysis. Not infrequently the chorda tympani branch of the facial nerve is involved alone and the patient complains of loss of taste along the anterior two-thirds of the border of the tongue.
7. Labyrinthitis is manifested by vertigo, nystagmus, loss of hearing, nausea and vomiting. The nystagmus is toward the infected ear and the falling tendency or past pointing to the unaffected side.

The medical or conservative treatment of chronic suppurative otitis media can be summarized as follows:

1. Extreme cleanliness is the first prerequisite. The patient should be seen frequently and instructed and encouraged to keep the external auditory canal clean with dry cotton applicators.
2. Purulent infections of the sinuses must be cleaned up before one can hope to obtain a dry ear.
3. Local application of drugs which are active against both gram positive and gram negative bacteria.

There is little question that with local cleansing and removal of excessive tubal tissue, granulations and polyps, many ears will cease discharging for varying periods. Unless these patients are seen frequently, however, the discharge will often recur. I would, therefore, like to emphasize the surgical treatment of chronic middle ear infection. It is my belief that a higher percentage of cures can be expected and the patient dismissed sooner through surgical treatment. The modified radical mastoidectomy is advised whenever possible. If there is little or no hearing or a cholesteatoma is present a radical mastoidectomy should be done. The endural approach as modified by Shambaugh is used routinely whether a modified radical or radical operation is done.

In order to expect good results following mastoid surgery one must exenterate as many of the cells as possible or if the mastoid is poorly pneumatized, remove the sclerotic bone until

all the important structures are outlined, visualized and cleaned of granulations. The following slides will better illustrate the surgical approach to chronic infections of the middle ear.

Summary

(1) Although the number of new cases of chronic suppurative otitis media has declined markedly during the past few years, the incidence in the United States has been estimated at from 2 to 4 per cent of the population.

(2) Of the four etiological causes discussed that proposed by Wittmaach in 1918 is the most common.

(3) The signs, symptoms and complications of chronic suppurative otitis media (mastoiditis) are briefly discussed.

(4) Conservative treatment of this condition is summarized.

(5) Surgical management of chronic suppurative otitis media is emphasized.

OBITUARY

JOHN S. LIEBLONG, age 70, Greenbrier, died August 2nd. A lifelong resident of Faulkner county, he graduated from the University of Arkansas School of Medicine in 1911 and spent all of the years of his practice at Greenbrier. An honorary member of the Faulkner County Medical Society and of the Arkansas Medical Society, he had been active in the affairs of medicine. Surviving relatives are his wife, two daughters and two sons.

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SURGICAL AND NON-SURGICAL MANAGEMENT OF THE PRE- SCHOOL CHILD WITH DEAFNESS*

EDMUND P. FOWLER, JR., M. D.

Department of Otolaryngology, College of Physicians and
Surgeons, Columbia University, New York

Cooperation of the child, diagnosis of his condition and accurate assessment of his hearing loss are necessary before one can discuss the management of the pre-school child with deafness. Accurate assessment of his hearing loss is the most important for nothing can be done intelligently without it, but the cooperation and diagnosis are also necessary.

One must begin with cooperation. Many deaf children are extremely hyperactive during the office visits. They can be highly destructive. It is my habit to clear the consultation room as much as possible of breakables, shut the doors into the treatment rooms and then start talking to the parent or parents ostensibly paying little attention to the child. Casually a paper dart is fashioned and shot into the air. Meanwhile the child is being observed and the history is being taken. The child is sent to pick up the dart. If he does not understand the pantomime or the words another dart is fashioned and shot across the room. If darts do not interest the child often small dolls or other toys will. Slowly, considerable is learned about his intelligence, his balance, his dependence on his parents, their reaction to him, etc. If the child is obviously going to be recalcitrant, attempts at an ear, nose and throat examination are not made at the first visit. Introduction to the hearing test procedure are made if possible, but if the child tires, even this is not pushed. Many toddlers of three or four enjoy the rotation test and this can occasionally be done at the first visit with cooperative children, but with smaller children the necessity of covering the eyes and restraint of the child by the adult holding the child in the proper position for rotation is very traumatic emotionally. In such cases the turning test is also relegated to later visits. Incidentally, as a rule, the turning test is more satisfactory than caloric tests except in unilateral deafnesses. Small children do not tolerate ice water in their ears without protest, which varies from slight to violent. If subsequent introduction to rehabilitation

is to be carried out smoothly the child must find the first visit a pleasurable experience. Rapport must be established. In my opinion, many hours are lost later and many erroneous impressions given trying to do the entire diagnostic and prognostic job in a single visit. The management of the pre-school child is a difficult and time consuming business and must be approached as such.

Accurate hearing tests are now in order. In my hands the most satisfactory has been conditioning techniques in which the child gets some reward for indicating that he hears the sound. Often the mother can teach the child to move a block or take it from a bag when a whistle is blown. If the mother can not teach the child the otologist or audiologist can often do it himself. This conditioning to the noise of a whistle can then be used for threshold audiometry, for a child quickly transfers the same play pattern to the high pitches of the audiometer.

Another popular technique at the Columbia-Presbyterian Medical Center is to have the child sitting on the floor facing his mother and away from the audiologist, who is behind a small screen. When the sound of an audiometer is turned on a puppet or other jumping jack type of toy is presented over the top of the screen. The child is shown that each time the sound goes on a puppet will appear and perhaps make a funny face. As soon as he learns to look upwards and backwards over his shoulder to see the puppet with loud sounds, he is conditioned to weaker and weaker sounds until a threshold is obtained. If these techniques do not work we try one of two other involving a slight electric shock. The child's foot or hand is placed on a plate into which a slight shock can be given with a faradic or galvanic stimulator. The extremity is held against the plate with strong elastic (a piece of non-synthetic tire tubing). When all is in readiness a loud sound is presented, a few seconds later a flash light is turned on and then a small electric shock is given to the extremity. Most children quickly learn that if they lift their foot or hand every time they hear the sound they will not receive the shock. After they learn to indicate that they are conditioned to the light and the loud sound the light is removed and if they still lift the extremity to avoid the shock, they obviously hear enough for a threshold audiogram to be attempted. Pavlovian conditioning using the "lie detector" or psychogalvanic method of Hardy and Bordley is used as a last resort. It is often successful when other methods fail. None of these methods is fool proof

* Presented to 75th Annual Session Arkansas Medical Society, Little Rock, April 24, 1951. Read before the Section on Eye, Ear, Nose and Throat.

however, and all need a well trained team of audiometrists to administer.

Examination of the ear drum is usually fairly easy compared to the tests described above but if wax is present there may even be some difficulty. If the child will not sit still on the mother or father's lap they must be mummied. As a rule, this allows a good examination of everything except the adenoid region. The latter in my experience can not be satisfactorily examined with a nasopharyngoscope in many children without a general anaesthesia. Fortunately, one can infer excess lymphoid tissue about the mouth of the eustachian tube if the drums are retracted and there are large masses of excess lymphoid tissue on the posterior pharyngeal wall below the palate or if the palate is pushed forward by a bulging mass. Palpation is a pretty traumatic experience and should not be done early in the doctor-patient relationship except in children where rapport is obviously on a high plane.

Many will ask why all this talk of adenoid examination in a deaf child. In most pre-school children deafness, nothing will be found in the physical examination which will account for the deafness; the etiology of the deafness will normally be found in the history, if it is found at all. There will often be a family history of deafness. Congenital atresia will be found with or without family history of congenital anomalies. A history of Rubella or some other illness in the mother during pregnancy is important. (Incidentally, I think that many mothers of deaf children suffer excessively from morning sickness or had mild or severe eclampsia during pregnancy.) There is often a suspicion of ingestion of quinine for abortion purposes. Few of the miscreants will admit this at first. Occasionally syphilis or some other serious disease has been present in the mother or father. Occasionally there is real birth trauma and occasionally erythroblastosis fetalis. Next comes severe infections such as meningitis, diphtheria or scarlet fever and mumps in infancy. Occasionally a history of concussion or fractured skull is elicited, and last but not least, otitis media of the usual streptococcal or purulent type or associated with pneumonia. There also may have been an otitis neonatorum.

Now otitis media can occur in a congenitally deaf child just as it can in a normal child, but if it does occur the consequences are much more severe in the deaf child than in the normal child. It is because of this fact that otological examination is so important in the pre-school deaf

child. If the 10 or 20 db loss which may occur with repeated otitis media can be prevented or ameliorated it must be done. Such care is even more important than in the normal child for the deaf child almost invariably has a few islands of hearing and these can be more effectively used if they are at 60 db than if they are at 80 db because of otitis media adhesions superimposed upon a nerve deafness.

If a deafened child has a history of repeated otitis media, sore throats, mouth breathing or other stigmata of adenoids, his nasopharynx should be cleared of adenoid tissue even more carefully than with a normal child. 10 or 15 db loss to him may be catastrophic even if it is only intermittent with each cold. He should be treated first by adenoidectomy with or without tonsillectomy as the case seems to warrant. Such therapy can be advised at an earlier age and with fewer indications than with a normal child. The stake is high. If the adenoidectomy is inadequate to prevent further recurrent otitis, radium should be used. There is little question in my mind that recurrences of otitis media are reduced in a high percentage of cases by using radium according to the Crowe method.

The surgical and non-surgical treatment for otitis media and its consequences must be explained to the family in the proper frame for reference. They are not a "cure" for the child's deafness, they are to prevent further destruction by superimposition of a middle ear deafness. Radium application, in particular, but also any operation to a somewhat lesser degree, seem occult and most lay people naturally expect a complete cure of the deafness if they are employed. If the facts are not completely discussed many parents will put off a proper educational program for the child in hopes that medical procedures will produce a cure. They must be warned a "cure of deafness" rarely, if ever, comes. As for the surgical treatment of congenital atresia. Corrective plastic procedures to my mind, are best put off until the child is fairly well developed. Prostheses are not very satisfactory at the age of five or six, either surgery or prosthesis should be tried for cosmetic reasons alone in boys. With girls the hair hides deformed auricles. As for the hearing the child with atresia can be carried along with lip reading, speech lessons and a bone conduction hearing aid. In my opinion, attempts to improve the hearing by reconstructing the canal through the mastoid should not be attempted at all on cases with unilateral atresia or microtia. The results are occasionally quite satisfactory for

adults especially if a fenestration is done in addition (Woodman). Observations of the results of others in children show that only in occasional cases is the hearing much improved after such opening of the canal through the mastoid without fenestration. Unfortunately, many of the operative procedures result in external otitis or deeper infections and the danger of this is too real at present to warrant recommendation of such operations for unilateral cases. Until our results are more clear cut and satisfactory with bilateral cases there is certainly no excuse for trying to improve the hearing of unilateral cases by canal operation with or without fenestration. In my experience up to the present before the use of Pattee's techniques, most of the operated cases have in the end to wear a hearing aid in spite of the operation. Even if some hearing improvement occurred it is not sufficient for social adequacy.

As with otitis media the expected results and the possibility of complete function must be explained to the family otherwise here again they will expect a "cure" and will waste valuable time waiting for it. It is wise to accustom the child to a hearing aid, auditory training, and lip reading before advising an operation. Then after a few years when the mastoid has grown enough to produce an adequate approach it can be casually suggested and an attempt made.

A review of the above remarks makes it clear that, as a rule, the otologist has little to offer the parent of a pre-school deaf child except diagnosis, prognosis, advice and guidance, but after all this is a great deal. If the otologist does not take the time for this his patients will eventually find their way into the hands of quacks or unscrupulous experimental surgeons. The last thing I ask a patient before he leaves the office is to check with me and with his family doctor before he seeks consultation elsewhere. There should, of course, be no objection made to the obtaining of another opinion, in fact it is often welcomed. If the patient desires such an opinion a conscientious physician can at least advise as to whether the new opinion sought is likely to be a competent one or outright quackery. After this it is, of course, the parent's business whether the advice is followed or not.

The most important role of the otologist in this type of situation is to assess the hearing loss accurately. If the deafness is slight (20-35 db) corrective measures may improve it immeasurably and prevent further deterioration. If it is moderate (35-50 db) or even severe (50-70 db),

hearing aids can be worn and the child fitted to go to a regular school. In fact with proper training and management and with proper programs in the regular schools, two-thirds of the children now in schools for the deaf could be in regular schools and be living at home where they belong. To do this not only the children but also the otologists, parents and educators must be taught to carry on the proper rehabilitative measures.

ANNOUNCEMENT

The 29th Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society will convene October 1 and last through October 4.

The final program will be announced later. The general form of the conference will be retained. In addition to the special features listed below, there will be the discussions by a very sparkling list of guest speakers which include:

Edward F. Bland, Boston, Verne R. Mason, Beverly Hills, and H. Marvin Pollard, Ann Arbor, Internists; John W. Cline, San Francisco, Warren H. Cole, Chicago, Mims Gage, New Orleans, and Herman E. Pearse, Rochester, New York, Surgeons; A. W. Adson, Neurosurgeon, Rochester, Minnesota; Ross Golden, Radiologist, New York City; Wm. F. Mengert, Obstetrician-Gynecologist, and Harold A. O'Brien, Urologist, Dallas; Heyworth N. Sanford, Pediatrician, Chicago; George Saslow, Neuropsychiatrist, St. Louis; J. R. Schenken, Pathologist, Omaha; I. S. Tassman, Ophthalmologist, Philadelphia; and Edward B. Tuohy, Anesthetist, Washington, D. C.

Special features will include—Daily Medical and Surgical Round Table Luncheons (with distinguished guests participating in question and answer periods); Clinicopathologic Conference, Monday evening; Entertainment, Tuesday evening; Panel Discussions and Sectional Lectures, Wednesday and Thursday mornings.

John W. Cline, President, American Medical Association, will present the Citizen-Physician Problem, "The Responsibility of the Individual Physician" on Tuesday morning.

Daily features will include Anatomical Demonstrations, Scientific and Technical Exhibits, Scientific Movies and Radio Broadcasts.

The registration fee of twenty dollars includes all daily features, scientific sessions, four luncheons, and the evening of entertainment.

A well attended and successful session is anticipated. For further information, write the Executive Office of the society, 630 Shukert Building, Kansas City 6, Missouri.

THE JOURNAL

OF THE

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EDITORIAL

REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

D. A. RHINEHART, M. D.
Little Rock

An attendance of over 12,000 physicians and a total registered attendance of 32,000, visitors from 46 foreign countries, 297 scientific exhibits, 350 technical exhibits, 358 papers presented in the meetings of 20 scientific sections, over 700 entries in the exhibit of the American Medical Art Association, 37 scientific motion pictures, colored television from the operation room and hospital bedside with audiences of 10,000, two nation-wide radio broadcasts, a full-scale golf tournament, the voluminous reports of the offi-

cers, the Board of Trustees, and the various committees and commissions, and the deliberations and actions of the House of Delegates, all contributed to the meeting of the American Medical Association in Atlantic City from June 11 to 15, 1951. The report of your delegates to the meeting can include only selected items believed to be of general interest to members of the Arkansas Medical Society.

The Distinguished Service Award went to Dr. A. O. Whipple of New York City.

The President and the Board of Trustees reported that grievance committees have been established in three-fourths of the states and 400 county medical societies. Night and emergency call systems have been established in 329 counties as of January 1, this year. Emphasis on general practice and the training of good family doctors is continuing with the result that general practice is attracting an increasing number of medical students and younger physicians. The President suggests that two general practice awards be made each year, one for a physician under, and the other over the age of 50. The Board recommended an expansion of the Association's activities in placing physicians in communities in which they are needed, and urged further physician-placement services in state medical societies.

The Board of Trustees recommended and the House of Delegates approved the creation of a national commission for the inspection and accreditation of hospitals, the commission to be a joint activity of the American College of Physicians, the American College of Surgeons, the American Hospital Association, and the American Medical Association. The Association would select 6 of the 18 members of the commission. The Board reported that it had accepted an invitation from the American Hospital Association to discuss hospital-physician relations.

The Board of Trustees announced plans for the enlargement of the Department of Public Relations of the Association by the employment of a full-time Field Director, an Executive Secretary, and the election of an advisory committee consisting of eight members made up of executive secretaries and public relations directors of constituent state medical societies.

President Henderson, as Chairman of the Coordinating Committee of the National Educational Campaign, gave a most interesting report. He said that nearly 11,000 local, state, and national organizations had passed resolutions against socialized medicine. In national adver-

tising over a million dollars had been spent in the educational campaign. In addition, 65,000 companies, groups, and individuals spent over two million dollars in tie-in advertisements to support medicine's position. He said that in the last general election over 90 per cent of the candidates known to be supporters of government medicine had been defeated at the polls. Temporarily, at least, physicians and their friends have defeated all efforts toward socialization, but he warned against complacency and urged that efforts to solidify medicine's position be continued.

The dues for the coming year were fixed at \$25.00 per member, including a subscription to the Journal. Exempted from the payment of dues were retired members and members for whom payment would be a hardship, provided they were partially or wholly exempted from payment of dues by their county and state societies. Members over 70 years of age, members in military service, and interns and residents for five years after graduation were exempted from the payment of dues.

The Board of Trustees announced that it plans to appoint a committee of prominent laymen representing industry, labor, education, agriculture, the bar, and the clergy from which to ask advice in matters of medical care and from which to obtain the viewpoint of the general public. Persons engaged in politics would not be included. The members of the committee all would be individuals so outstanding that their opinions will receive unquestioned respect.

A ruling of the Commissioner of Internal Revenue does not permit physicians to deduct the expenses of postgraduate courses when compiling income tax reports. The Committee on Legislation and Public Relations recommended and the Board of Trustees approved another effort to have the Commissioner of Internal Revenue change this ruling. If this fails, then an effort will be made to bring this issue before the United States Tax Court.

Three resolutions were introduced in the House of Delegates to the effect that the American Medical Association seek legislation permitting a physician or other self-employed person to set aside as a retirement or pension fund a certain percentage of annual income, this income to be tax exempt until the money is realized from the fund. Officers and employees of industry and corporations now have this privilege. It was the action of the House to urge support of such legislation, giving special consideration to any

legislation formulated by the American Bar Association.

Resolutions were presented and approved by the House of Delegates favoring changes in the constitution and by-laws permitting members of the Association to take part in all organizational and scientific activities. The resolutions favored abandoning "Fellowship" in the Association and having only one class of membership.

At first the Board of Trustees favored terminating the services of Whitaker and Baxter as directors of the National Educational Campaign and abolishing the Coordinating Committee. Upon recommendation of the House of Delegates the services of Whitaker and Baxter were retained on a part-time basis for 1952, and the Coordinating Committee was continued under the chairmanship of the immediate past-president of the Association, Dr. Elmer L. Henderson. Dr. R. B. Robins of Camden is a member of the Coordinating Committee.

Dr. Louis H. Bauer of Hempstead, L. I., was elected President-elect without opposition. The Clinical Session of the Association will be held in Los Angeles, December 4-7, 1951, and the Annual Session for 1952 will be held in Chicago, June 9-13.

Signed: W. R. Brooksher, M. D.,
D. A. Rhinehart, M. D.,
Delegates from Arkansas.

P. S.: 1. Dr. W. R. Brooksher serves as chairman of the Reference Committee on Insurance and Medical Service.

2. Dr. R. B. Robins, Camden, Arkansas, did an excellent job Vice-Presidenting.

3. The President and President-Elect were added to the Board of Trustees as recommended in a resolution from the Arkansas Medical Society last year.

4. The House of Delegates adopted a resolution introduced by Brooksher of Arkansas protesting the use of tax funds for postgraduate work for the medical profession.

5. A full report of the meeting and the deliberations of the House of Delegates is included in the June 30 and July 7, 1951, numbers of the Journal of the American Medical Association. These reports are recommended reading for all members of the Arkansas Medical Society.

THE FIRST ARKANSAS RURAL HEALTH CONFERENCE

A registration of over six hundred eloquently testified to the interest of rural citizens and others in rural health in Arkansas at the first Rural Health Conference at Little Rock, Au-

gust 9th and 10th. Participants in the program stated that the attendance was greater than in any state which has previously held such a conference, and for that matter, larger than the annual meeting sponsored by the American Medical Association. A partial break-down of the registrants showed attendance from the following organizations: Arkansas Medical Society, 100; American Medical Association, 12; University of Arkansas Extension Service, 96; Home Demonstration Clubs, 123; Arkansas Dental Society, 17; Arkansas Cancer Society, 2; Woman's Auxiliary to the Arkansas Medical Society, 49; Arkansas Farm Bureau, 65; Arkansas Pharmaceutical Association, 1, with representatives present from a number of other organizations.

Designed to study the health needs of rural Arkansas the conference offered a means for expression of estimates of the need together with opportunity for discussion of methods available to supply it as well as an evaluation of services which rural Arkansas may now obtain. The general impression, and an unanimous one, was for extension of health education in the state and it was pointedly stated that the physicians should assume the leadership in this field. The Journal will later publish summaries of the addresses to the conference.

RANDOM THOUGHTS OF THE SECRETARY

July 28th. Visiting Kansas City today where disaster has shown that pioneer spirit survives and that it is truly a place with mud on its feet but with stars in its eyes.

July 31st. Congress investigates baseball, an American institution which has not sought Federal aid in the conduct of its affairs and woe betide the sport if Washington attempts its direction.

August 3rd. Visiting with Lockwood at Fayetteville, an opportunity to refresh in radiological interpretation and then to discuss in learned (or a semblance thereof) orthopedic surgery with Fount Richardson.

August 7th. At tonight's staff meeting the internist reports "moderate inflammation" in a case with necrosis while the pathologist states that the disease carries a "poor prognosis" on a lesion without hope of cure, instances of understatements we avow.

BOOK REVIEW

Practical Clinical Psychiatry. By Edward A. Strecker, A.B., A.M., Sc.D., Litt.D., LL.D., M.D., Professor of Psychiatry, School of Medicine, University of Pennsylvania. Franklin G. Ebaugh, A.B., M.D., Professor of Psychiatry, University of Colorado, School of Medicine; Director, Colorado Psychopathic Hospital. Jack R. Ewalt, M.D., Professor of Neuro-Psychiatry; Administrator of Hospitals, University of Texas Medical Branch, Galveston, Texas. Seventh Edition, 1951. Blakiston Co., Philadelphia.

Only four years have passed since the publication of the sixth edition of this textbook, but inclusion of several new

chapters warrants the appearance of this new seventh edition. The authors of this textbook have had extensive experience in treating patients, as well as in teaching students in three different medical schools. This volume is accepted as a standard textbook of psychiatry in many medical schools throughout the United States. This seventh edition is addressed primarily to medical students and physicians in general practice, as well as in every specialty and subdivision of medicine and surgery. Nothing new has been added in the examination methods or treatment methods of the psychoses.

The authors point out that 60 per cent of the patients presenting themselves to the offices of physicians and surgeons do not have organic disease. The intimate contacts with the family which are enjoyed by obstetricians, pediatricians and general practitioners place them in the position to handle most of the emotional illnesses of the patients. These physicians will find this edition very helpful, inasmuch as several chapters along these lines have been added. In the chapter on psychopathology the various dynamic mechanisms of emotional disturbances are explained in great detail. The chapter on support therapy is also very helpful. The authors point out that in functional illness there are certainly some patients who cannot recover no matter how brilliant the diagnosis and treatment may be. Many helpful points are revealed which will enable the physician to ease the suffering of these patients and carry them along, although not eradicating the etiological factors of their illness.

The treatment of neurosyphilis is brought up to date. This chapter still retains the fever and malaria therapy technique, although it is now rarely indicated since excellent results are obtained from the sole use of penicillin.

The chapter on alcoholism includes the technique of Antabuse therapy, although the dangers and difficulties encountered in treatment make it a dangerous drug to handle unless the physician has extensive experience with the medication.

This book is extremely well written and follows a literary style which has a logical, clear presentation of the material. The book can be highly recommended as one of the better, concise textbooks on psychiatry.

Electroencephalography in Clinical Practice: By Robert S. Schwab, M.D., Director of the Brain Wave Laboratory, Massachusetts General Hospital, and Associate in Neurology, Harvard Medical School. 195 pages with 106 figures. Philadelphia & London: W. B. Saunders Company, 1951. Price \$6.50.

This one hundred and ninety-five page book, which was written primarily for those who, though not electroencephalographers themselves, are interested in what electroencephalography has to offer in diagnosis and treatment, amply covers its subject.

Dr. Schwab devotes separate chapters to such pertinent subjects as technique, normal and abnormal electroencephalograms, electrophysiology, research, correlation of electroencephalography with other diagnostic procedures, epilepsy, neurologic and neurosurgical problems, psychiatric problems, and finally to organization of a laboratory.

All of the chapters contain references to the original articles published on the various aspects of these subjects. A glossary of specialized terms enhances this excellent book.

Louis V. Manley, M. D.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

SPONTANEOUS PNEUMOTHORAX—CONTRAST OF THE BENIGN IDIOPATHIC AND THE TUBERCULOUS TYPES

BERNARD HYDE, M. D., and LEROY HYDE, M. D.

Annals of Internal Medicine, December, 1950

Spontaneous pneumothorax has been known to physicians for many years. The dramatic picture of sudden unilateral chest pain with dyspnea and the finding of a collapsed lung on physical examination and chest roentgenogram are easily recognized. Although it was once believed that all spontaneous pneumothoraces were tuberculous, it has been shown that spontaneous pneumothorax may be produced by diseases such as bacterial pneumonia and may occur in apparently healthy individuals. It is important to differentiate spontaneous pneumothorax caused by tuberculosis from that occurring in the healthy, because of the differences in treatment and prognosis.

The exact frequencies of benign idiopathic spontaneous pneumothorax and tuberculous pneumothorax are difficult to determine. The former entity is often unrecognized as such and wrongly diagnosed as tuberculosis. A physician in a tuberculosis sanatorium would be likely to see more cases of tuberculous spontaneous pneumothorax, whereas one in general practice would see more cases of benign idiopathic spontaneous pneumothorax.

At the Birmingham Veterans Administration Hospital, the Thoracic Service cares for patients with both tuberculous and nontuberculous disease. In a two-year period, there have been 41 cases of benign idiopathic spontaneous pneumothorax but only 10 cases of tuberculous spontaneous pneumothorax. To contrast benign idiopathic spontaneous pneumothorax (which occurs in apparently healthy individuals) and tuberculous spontaneous pneumothorax (which occurs in patients with pulmonary tuberculosis), our data, based on 76 cases of the former and 35 patients with the latter, are presented.

I. Benign Spontaneous Pneumothorax

In 1943 the United States Army had 873 hospital admissions for benign idiopathic spontan-

eous pneumothorax. In our series the ages of the patients varied from 18 to 62 years of age with almost 50 per cent between 20 and 30 years. Males are more frequently affected, in a ratio of about five to one. Each side of the chest is equally involved. The time necessary for re-expansion of the collapsed lung varies greatly. In almost 70 per cent of the patients it was seven weeks or less.

The etiology is unknown. The patients are apparently healthy but usually underweight and never obese. A very few have a history of bronchial asthma, but none had had an asthmatic attack at the onset of the spontaneous pneumothorax. Spontaneous pneumothorax has no relation to effort but chest pain, usually described as "sharp" and "cutting," is almost always present on the affected side. Frequently the pain was pleuritic and lasted from one to four days. However, benign idiopathic spontaneous pneumothorax may be completely asymptomatic. Dyspnea was noted in 83 per cent of our patients and cyanosis was found in eight per cent.

Patients with benign idiopathic spontaneous pneumothorax do not reveal lateral pleural adhesions on the chest roentgenogram in our experience. Only four had fluid significantly above the level of the diaphragm, and in all of these cases aspiration revealed pure bloody fluid. All other patients with benign spontaneous pneumothorax had either no fluid or fluid simply filling the costophrenic angle to the level of the diaphragm. Chest roentgenogram in the benign group reveals no pulmonary infiltration either at the time of the lung collapse or later, when the lung is re-expanded.

Only 10 per cent of the patients in this group had fever, and this never lasted more than seven days. The white blood count and the sedimentation rate were normal in 70 per cent of the cases. Twenty per cent of the patients with benign idiopathic spontaneous pneumothorax have a recurrence.

Treatment is symptomatic. The patient is kept

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Following Birtcher tradition the chassis is of welded construction. All parts, including the transformer, condensers, tubes and crystal stage, are mounted on a single chassis which may be easily lifted from the cabinet for service or inspection. This construction assures lifelong durability and performance.



at bed rest with bathroom privileges until the collapsed lung has re-expanded to about 80 or 85 per cent of its volume. With 85 per cent re-expansion the patient is more completely ambulated and following complete re-expansion the patient is allowed full activity. Active intervention is required only in those few cases of tension pneumothorax where aspiration of air and the institution of underwater drainage of the pleural cavity may be life saving.

II. Tuberculous Spontaneous Pneumothorax

Tuberculous spontaneous pneumothorax is usually secondary to sub-pleural caseation with erosion and rupture of the visceral pleura. Air enters the pleural space and the lung on that side collapses. Symptoms vary from none to a sharp, acute, tearing chest pain with dyspnea. Of the 35 patients with tuberculous spontaneous pneumothorax, 25 had sudden pain on the affected side. Since most of these patients were fairly ill with their pulmonary tuberculosis, their pain thresholds may have been elevated. Dyspnea was noted by 27 patients. Examination of the chest roentgen-ray revealed tuberculous infiltration of varying degree but usually far advanced. Lateral pleural adhesions were demonstrable on the chest film in 32 patients, or 91 per cent of the group. Pleural fluid was above the level of the diaphragm in 54 per cent of these patients. Tuberculous spontaneous pneumothorax may affect either side with equal frequency and is not related to effort.

Patients who develop tuberculous spontaneous pneumothorax usually are fairly ill. The sudden onset of a spontaneous pneumothorax, with or without pleural fluid, adds to the patient's respiratory embarrassment and toxemia. Prolonged fever and tachycardia are common. The pleural fluid varied from serous to purulent, and often revealed acid-fast bacilli on concentrate and culture. Of this group, one half had normal sedimentation rates and one half had normal white blood counts with their tuberculous spontaneous pneumothorax. The ages of the group of 35 patients varied from 19 to 70 years. The immediate hospital mortality rate of 29 per cent was caused by both the patient's pulmonary disease and his tuberculous spontaneous pneumothorax. The ultimate mortality rate cannot be stated since most of these patients were transferred to other tuberculosis sanatoria.

Treatment varies with the degree of symptoms. If dyspnea is not severe, no specific therapy is indicated. If a tension pneumothorax is present,

an indwelling needle with underwater drainage reduces the increased intrapleural pressure. Management of the pleural effusion varies. Patients with minimal fluid require no thoracentesis. If dyspnea and cyanosis caused by the free pleural fluid are significant, removal is advised. The patient's underlying pulmonary tuberculosis must, of course, be treated.

Benign idiopathic spontaneous pneumothorax and tuberculous spontaneous pneumothorax are two distinct entities with different causes, clinical pictures, and mortality rates. Cases of spontaneous pneumothorax must be carefully observed and the type or cause determined.

Benign idiopathic spontaneous pneumothorax appeared to occur four times as frequently as tuberculous spontaneous pneumothorax.

CIVILIAN MEDICAL CARE FOR THE ARMY

One of the most important and necessary services furnished the American soldier is adequate and timely medical care and treatment, including hospitalization. This service is provided for Army personnel in the United States generally by dispensaries, infirmaries, and hospitals located at the many Army installations throughout the country. There are many locations, however, where Army or other United States federal medical treatment facilities are not available when medical service is required by Army personnel. In cases of this nature, the services of civilian physicians, clinics, and hospitals are necessary. With the expansion of the Army and the deployment of Army personnel to practically all points in the United States either on a duty, travel, or leave status, the continued cooperation of civilian physicians and agencies is of utmost importance in providing adequate medical service to the U. S. soldier in time of need.

Certain criteria and procedures have been established in connection with the furnishing of medical service to Army personnel by civilians in accordance with the current laws and regulations. These criteria define the conditions under which individuals of the Army may be authorized civilian medical care at the expense of the Army. These procedures include methods for reporting and receiving payment for treatment or hospitalization of Army personnel by the civilian medical agencies.

Civilian medical care (other than elective) at the expense of the Army is authorized for com-

missioned officers, contract surgeons when employed by the Army on a full-time basis, warrant officers, enlisted personnel, cadets of the United States Military Academy, general prisoners and prisoners of war when these personnel are on a duty status or when they are absent from their place of duty on leave or informal leave (pass) status. Applicants for enlistment in the Army and selectees also are authorized necessary civilian medical care at the expense of Army funds while they are being processed for enlistment or induction into the Army. Payment for civilian medical expenses incurred by Army personnel who are absent without leave is not authorized. Any obligations resulting from civilian medical care to Army personnel who are absent without leave are the responsibility of the Army individual concerned.

Normally, civilian medical care for Army personnel is authorized only when there are no other federal medical treatment facilities available. First aid or emergency treatment is authorized at any time, notwithstanding the proximity of Army or other federal medical treatment facilities. In this connection, emergency medical care may be defined as that required to save life, limb, or prevent great suffering. Surgical operations should not be performed without prior approval of military authorities, unless indicated as an emergency procedure. Elective medical treatment in civilian medical treatment facilities or by civilian physicians will not be authorized as Army funds cannot be used for payment of these services.

Due to the limitation of funds available to the Army, medical care of dependents of military personnel may obtain available medical care at Department of Defense medical facilities only. Any obligations resulting from civilian medical care to dependents of military personnel are the responsibility of the dependents concerned or their sponsors.

As a general rule, local military commanders will furnish the civilian medical agency with prior written authority for ordinary medical care to Army personnel under his jurisdiction. In such cases, prior arrangements with the civilian medical agency will be made by the individual or by a proper military authority. For emergency cases treated without prior written authorization, the surgeon of the nearest military command should immediately be notified by the civilian medical agency, giving the individual's name, organization, nature of illness or injury and statement of the practicability of transfer of the patient to

an Army or other governmental hospital. The civilian agency or physician then will be advised without delay by the appropriate military authorities as to procedures to be followed.

Bills for authorized medical care and treatment of Army personnel should be submitted to the commanding officer of the organization to which the patient belongs, or to the military authority who provided the authorization for the medical service. If the location of these individuals is not readily known or if such military commanders authorizing treatment have moved to another station, the bill should be sent to the military authority listed below.

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METHANTHELINE BROMIDE.—*Banthine*[®] Bromide (Searle)

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Actions and Uses.—Methantheline bromide, a parasympatholytic agent, produces both the peripheral action of anticholinergic drugs such as atropine and the ganglionic blocking action of drugs such as tetraethylammonium chloride. Tolerated amounts of methantheline bromide exert side effects typical of atropine-like drugs, but cause less tachycardia, and also less postural hypotension than does tetraethylammonium chloride. Toxic doses produce a curare-like action at the somatic neuromuscular junction.

Clinical studies indicate that the drug effectively inhibits motility of the gastrointestinal and genitourinary tracts and, to a variable degree, diminishes the volume of perspiration and salivary, gastric and pancreatic secretions. It also decreases mucoprotein secretion. Like atropine, it produces mydriasis and cycloplegia when applied locally to the eye or administered systemically, but until more clinical evidence becomes available, its local use for this purpose is not recommended. The value of the drug for preventing abnormal cardiac reflexes through the vagus during thoracic surgery, or as an agent for routine preoperative medication in place of atropine, requires further investigation before final conclusions can be reached.

Methantheline bromide is indicated for clinical use whenever anticholinergic spasmolytic action is desired, provided it is not contraindicated because of its atropine-like characteristics or because of a patient's intolerance to the unavoidable side effects of such therapy. It is useful as an adjunct in the management of peptic ulcer, chronic hypertrophic gastritis, certain less specific forms of gastritis, pylorospasm, hyperemesis gravidarum, biliary dyskinesia, acute and chronic pancreatitis, hypermotility of the small intestine not associated with organic change, ileostomies, spastic colon (mucous colitis, irritable bowel), diverticulitis, ureteral and urinary bladder spasm, hyperhidrosis or control of normal sweating which aggravates certain dermatoses, and control of salivation.

Methantheline bromide produces some degree of cycloplegia and mydriasis in therapeutic doses and

therefore should not be administered to patients with glaucoma. It sometimes decreases the ability to read fine print. Xerostomia (dryness of the mouth) is a common, sometimes transient, side effect. Urinary retention of varying degree may occur in elderly male patients with prostatic hypertrophy, and some patients may have difficulty emptying the rectum. Patients with edematous duodenal ulceration may experience nausea and vomiting during initial administration of the drug. These patients should take only liquids during the institution of drug therapy. All patients should be advised of the possible occurrence of side effects. Overdosage sufficient to produce a curare-like action may be counteracted by prompt subcutaneous injection of 2 mg. of neostigmine methylsulfate.

Dosage.—Methantheline bromide is administered orally or parenterally by either the intramuscular or intravenous route. Parenteral administration is not advised for patients able to take the drug orally. The average initial adult dose, oral or parenteral, is 50 mg. For patients with considerable intolerance, 25 mg. may be employed. In the management of peptic ulcer, a beginning schedule of 50 mg. three times daily before meals and 100 to 150 mg. on retiring is suggested. However, the usual effective dose is 100 mg. four times daily, although some patients may require more or less than this amount. The dosage may be increased to tolerance, using dryness of the mouth as a guide, and adjusted to meet the individual response of patients. Maintenance dosage in peptic ulcer is usually considered to be about one-half the therapeutic level. In the management of other hypermotile or hypersecretory states, the dosage should be adjusted to the smallest amount which will relieve the symptoms. When spastic conditions are secondary to inflammatory or other organic lesions, therapy directed toward the cause should be employed whenever possible.

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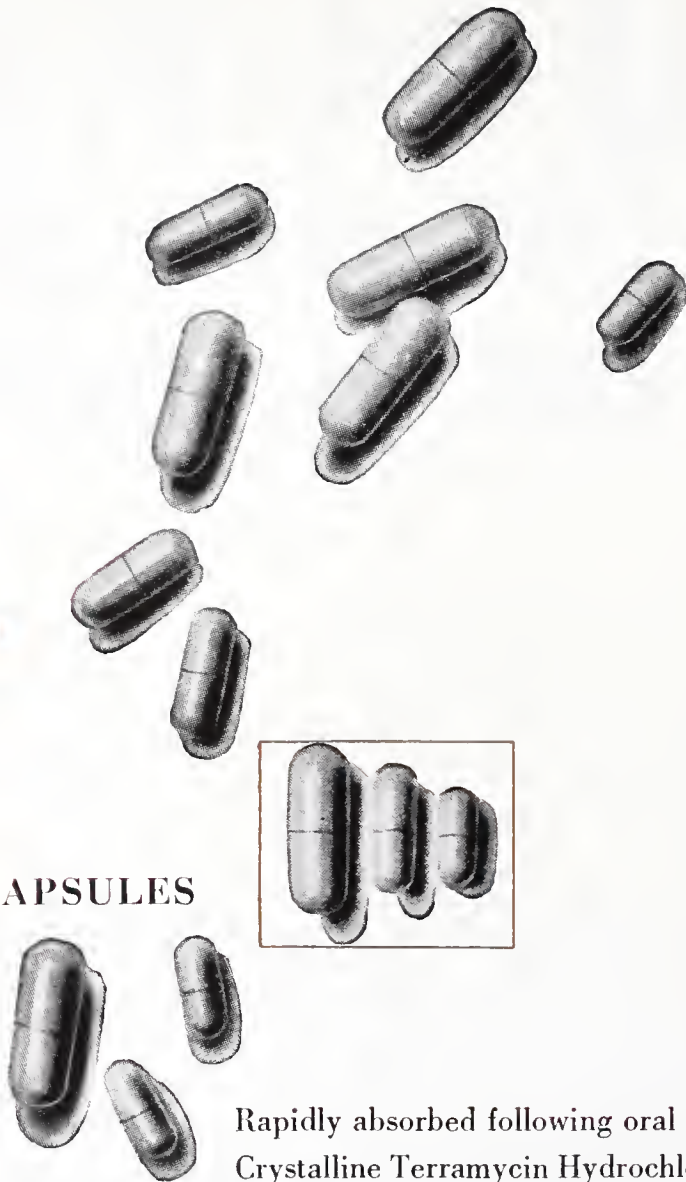
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THE OPTIMUM AGE AND PROCEDURE OF CHOICE FOR ELECTIVE SURGERY IN INFANCY AND CHILDHOOD*†

LUTHER A. LONGINO, M. D.
Boston, Massachusetts

A large proportion of the surgical procedures that are indicated in infants and children are operations of choice. In nearly all of these cases operation is performed to relieve a condition due to some congenital defect which later in life might prove to be a serious handicap to proper growth and development. This paper briefly presents our opinions as to the time of choice and procedure of choice for relief of these various conditions. It is based on the work of the surgeons at The Children's Hospital who have an extensive experience in this particular field.

Harelip and Cleft Palate

One of the congenital anomalies that causes the family a great deal of concern is a harelip, with or without an associated cleft palate. Soon after birth or when the first feedings are started these patients should be fed with a Breck type of feeder in a bolt, upright position. Feedings are tolerated much better with this routine and there is less chance of aspiration. The optimum time for surgical repair of this condition is from four to six weeks of age when the baby has been well adjusted to his formula and is gaining weight. The surgical management depends upon the type of defect which is present, whether it be a complete or incomplete harelip, or unilateral or bilateral, or any combination of the above and also on the associated bony defect in the maxilla. Postoperatively, the baby is kept on Breck feedings, still fed in an upright position. This routine is continued for approximately one month postoperatively. If the child does not have an associated cleft palate, bottle feed-

ings with a nipple can be begun at this time. However, if there is an associated palate defect the patient is gradually trained to take fluids from a spoon or a cup until such a time as corrective surgery can be carried out on the palate.

Repair of a palatal defect should be deferred until the patient is 18 months to 2 years of age. It is necessary to defer, in this way, because prior to that time the mouth is so small that it makes the operation very difficult and at times a very disappointing procedure. It is advisable to operate before the child has learned to talk. If the youngster is already talking, closure of the cleft in the roof of the mouth does not in itself correct the speech defect. The child must be taught again the use of the vocal muscles to overcome the nasal quality in the speech. Post-operative speech training is usually needed, in greater or lesser degree, in all cases of cleft palate.

In repairs of both harelip and cleft palate it is essential that the child be in satisfactory condition to stand a long operation and one that may incur a moderate degree of blood loss. A steady gain in weight is one of the best guides, especially in infants. Absolute freedom from any nasopharyngitis is essential. Any upper respiratory infection, however slight, may cause an infection of the suture line and failure of the entire operation.

Supernumerary Digits

Extra digits do not interfere with the child's normal development. However, most of these children are brought to the physician early for surgical removal of these anomalies. Rudimentary tabs, that are most often found on the little finger, can be satisfactorily removed in the newborn period. In full size extra fingers or thumbs the condition of the bones should be ascertained by X-ray examination. When a bifid phalanx or metacarpal or complicated joint is present, we feel that operative correction should be delayed until the child is 2 or 3 years of age. At this age the necessary postoperative splinting can be more satisfactorily handled. Extra digits on the feet should be removed before the child

* Read before Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 23, 1951.

† From the Department of Surgery of the Harvard Medical School and the Surgical Service of The Children's Hospital.

begins to walk in order to obtain properly fitted shoes.

Webbed Fingers

Another malformation of the digits which causes a great deal of concern is webbed fingers. The need for skin grafting and also for postoperative splinting makes it quite essential to put off operative correction for several years. Operation should be delayed until the hand is large enough to splint satisfactorily. If this is not done, the best surgical procedure will be ruined by continuous motion of the fingers. Webbed toes rarely give any difficulty and we choose not to do any surgical correction unless there is a severe or disabling deformity.

Ear Anomalies

Multiple congenital anomalies can, and do, occur about the ears and the most common of these is the so-called lop ear. In the female, we are very reluctant to carry out any operative procedure for lop ears, for most of these can be covered over by appropriate management and arrangement of the hair. In the male, the optimum time for correction is about the age of 5 or 6 years. Some of these children are quite sensitive about their deformities and it is well to correct the anomaly prior to the time the child enters school. Congenital absence of an ear, fortunately, is quite rare but, as in lop ears, the female can usually hide it with different types of hair management. Certainly, the surgical construction of an ear is associated with numerous difficulties plus unavoidable scarring elsewhere on the body. Plastic prosthetic appliances that can be attached to the skin are now available and are usually much more satisfactory than the surgically reconstructed ear.

Naevi

Hairy, pigmented naevi of any great size are fortunately quite rare. The majority of these can be excised and a primary closure carried out; some of the larger ones have to be excised and replaced by grafted skin. In all cases the excision should be wide and carried deep into the subcutaneous tissue. Before puberty malignant changes are relatively rare and a wide excision protects the patient from the possibility of superimposed malignant changes in later life.

Hemangiomas

The hemangiomas are very common and in our clinic the majority of these are now treated by X-ray therapy, care being given to prevent damage to any underlying epiphyses. The treatment of large port-wine nevi has been extremely disappointing as X-ray therapy has been of no

avail. While tattooing, which is still in its infancy, has appeared to be a fair solution to the problem, it is still too soon to make any definite statement as to its efficacy. Cosmetics, such as "Cover Mark" are valuable in hiding these blemishes.

Thyroglossal and Branchiogenic Remnants

Thyroglossal sinuses and cysts may present themselves at any time during infancy or childhood. They may be evident by a swelling or a draining sinus in the midline of the neck, usually below the hyoid bone. If infection is not present, it is wiser to delay operative procedure until the child has passed the first year of life. At this time excision of the cyst and its associated sinus tract along with the midportion of the hyoid bone gives almost 100 per cent cure. If infection is present or troublesome, it should be treated by some of the chemotherapeutic or antibiotic agents, and possibly drained if there is a local abscess. To undertake an excision during the stage of an acute exacerbation of an infection will prove very disappointing, and indeed, at times requires a second operation.

Branchiogenic cysts and sinuses appear along the lower half of the anterior border of the sternomastoid muscle and, as with the thyroglossal cyst, it is much better to delay operation until the first year of life has passed. If superimposed infection is troublesome or is recurring, surgery can be carried out at any age, but the over-all results will not be as satisfactory as those obtained in an older child. Any incision in the neck should always be placed in the skin folds to obtain the best cosmetic results.

Hygromas

Cystic hygromas, occasionally called cystic lymphangiomas, are malformations of the lymphatic system. Their most common location is in the cervical and thoracic regions, but they may occur in many other places throughout the body. This condition is usually noted soon after birth and is one that shows gradual enlargement over a period of time. Some have hemorrhage into the cystic spaces and enlargement can be quite rapid, and indeed, at times may be disturbing if it causes pressure upon the trachea with respiratory embarrassment. The treatment of choice is excision as soon as the diagnosis is made. In some cases this lesion may be so extensive that a two- or three-stage removal may be necessary, particularly if there is extension of the mass into the thorax. Dissection must be wide, extensive, and meticulous. If it is impossible to remove all of the cystic structure, any remnants should be ruptured and treated with a

sclerosing solution. One should always be hesitant in promising a permanent cure to the parents, since some of these lesions are prone to recur if any small islands of tissue have been left in the depths of the wound.

Inguinal Hernia

Inguinal hernia in a child is almost invariably of the indirect type. A hernia is frequently discovered at or shortly after birth and indeed, some of the larger scrotal variety are found during the neonatal period. The majority, however, are first noticed during the second or third month when the child becomes stronger and straining or crying forces the intestine down into the persisting sac. In the past ten years, we have come to believe that inguinal hernias in infants or children can be operated upon satisfactorily at any age. We now recommend operation as soon as the diagnosis is made. The incidence of strangulation and incarceration are much greater during the first year of life and this danger is eliminated with early repair of the defect. In The Children's Hospital we routinely use the Ferguson type of repair. Extreme care should be used in the closure to see that the spermatic cord and its vessels are not encroached upon. These children are all allowed to return home the day after operation. In infants no attempt is made to limit their activity. The older children are out of bed the day following operation and appear to be quite comfortable; we limit their activity for a period of one week or ten days.

Hydroceles

Hydroceles are frequently encountered in infants and young children. A hydrocele of the tunica vaginalis seldom requires operation within the first year of life, provided no obvious hernia is associated with it. The accumulation of fluid will often disappear without treatment. Infants need not be operated upon unless the mass is large enough or tense enough to cause discomfort. Hydroceles of the tunica which persist after the first year of life or which appear after this age usually require surgical treatment, since they have little tendency to subside spontaneously, and usually indicate that there is a tiny communicating hernia above them. Aspiration of hydroceles in children should always be avoided.

Undescended Testes

These patients are usually brought to the physician because a small scrotum is noted and the parents are concerned about the future development of the sexual apparatus. Undescended testicle is rarely the cause of discomfort. About

50 per cent of undescended testes are right-sided, 20 per cent are bilateral, and 30 per cent are left-sided. The vast majority of these boys have an indirect inguinal hernia associated with the undescended testis. In most males the normal descent of a testis is completed before birth, but such a process can be delayed and can continue during childhood; in some instances, an undescended testicle does not enter the scrotum until or just before puberty. When the diagnosis is made in early childhood, these children should be seen at yearly intervals, to check on the position of the testicle and to notice over a period of time if there is any spontaneous descent. We feel that the hormone treatment for undescended testes accomplishes little or nothing of permanent value. It precipitates the descent of only those testicles which would spontaneously descend if left alone for a few more years.

When surgical therapy is needed, it is best done between the ninth and twelfth years. If an associated hernia is troublesome and demands earlier treatment, herniorrhaphy may be required in the first few years of life, but the operator must be prepared to perform an orchidopexy at the same time. If the dissection is exacting and delicate, this combination has fairly good promise of success. The operation of choice is one that is made through a long, cutaneous incision over the inguinal canal. The external oblique fascia is opened and the testicle is located and freed from all adhesions, following which the vas and the vessels are freed up retroperitoneally. The scrotum is stretched thoroughly and a retention suture is placed through the lower pole of the testicle and brought out through the scrotum; this suture is attached to an elastic band and is anchored to the thigh with adhesive. The purpose of this band is to hold the testicle in the scrotum as healing takes place but it certainly will not draw a testicle down that has not been freed up thoroughly. We believe that Torek operations are entirely unnecessary and to use them is an admission that sufficient freedom of the cord structures has not been obtained. In the one-stage operation, where we employ the retention suture, this is left in place for five to six days, and is removed at the same time as the skin sutures. After this time the patient has complete mobility. We believe it is probably better judgment to treat bilateral cases with two separate operations, which, however, may be completed during one hospitalization.

I would like to touch upon a few of the com-

mon anomalies of the genito-urinary tract. Under a discussion of this type I do not think it would be fair to skip one of the most common lesions seen by most men in the practice of medicine and surgery today, namely, phimosis. In our clinic we are seldom called upon to do a circumcision within the first few weeks of life. The patients we see are usually older and it has been our practice to defer circumcision until the boy is trained in his urinary habits. After this stage the danger of ammoniacal dermatitis has greatly subsided. It is a well known fact that this condition, with its resulting meatal ulcer, is a more troublesome lesion in a circumcised infant than in one who has not been circumcised.

Exstrophy of Bladder

Exstrophy of the bladder is one of the most distressing congenital malformations which the surgeon must treat. The bladder, opening as it does on the anterior abdominal wall, allows a continual escape of urine which produces malodorous and disagreeable wetting of the clothing. The everted and exposed mucous membrane is very sensitive and is easily irritated by any overlying pad or dressing. During the first few years of life the exposed bladder mucosa can be protected by closely woven gauze that is coated with vaseline or boric acid ointment. The gauze used, over the open bladder, should be clean but it does not have to be sterile. The therapeutic problems are threefold: (1) to provide an adequate receptacle which can receive and discharge urine at suitable intervals, (2) to remove the discomfort caused by the exposed bladder membrane, and (3) to stabilize the pelvis and improve the manner of walking. It has been our practice to delay operation until such a time as the patient has good anal sphincter control. To transplant ureters into the sigmoid prior to this time means an almost continual leakage of urine and feces from the anus, and it is our opinion that development of anal sphincter control is delayed thereby. At the age of 3 or 4 years the first operative procedure carried out is a bilateral ureterosigmoidostomy. Following this at a period of approximately six months a plastic operation is done to the anterior abdominal wall with excision of the bladder mucosa and a repair of the co-existing epispadias. No operative procedure is necessary on the widely separated pubic bones, for we have found that the pelvis seems to become rather more stable as the child becomes older.

An opening of the urethra may occur anywhere from the perineum out to the tip of the

glans penis. Those that are just underneath the glans penis and cause no obstruction to the urinary stream are better left without attempting any surgical procedures. Those where the urethral orifice is along the shaft of the penis or in the perineum often have a stricture at the urethral orifice and may require dilatation early in infancy. As the patient grows older and the penis develops, there is usually an associated ventral bowing or chordee of the penis. This is caused by contracting bands in the spongiosa; these bands should be divided early to allow straight growth of the penis. Construction of the penile urethra is delayed until the boy is approximately 10 years of age. By this time the penis will have attained sufficient size, and the child will be more co-operative in the postoperative period. There have been numerous technics devised for operative correction of the hypospadiac penis. The most successful method of reconstructing the urethra is by making a tunnel in the subcutaneous tissues of the under surface of the penis, lining this with an inverted Thiersch graft tube of skin; this forms a channel which can be subsequently joined up with the proximal portion of the urethra. I think it should be mentioned that these patients should never be circumcised in early childhood, since the prepuce at times can supply some skin which may be employed in the construction of the urethra.

Summary

The entire gamut of elective surgical procedures in infancy and childhood cannot be covered in a presentation of this kind. I have tried to select some of the more common types of congenital anomalies and especially some of the more distressing ones. Possibly the operative procedures I have outlined may be changed within the next few years. With more interest being shown in the surgery of infants and children, and with the development of better technics and anaesthesia, such further changes are to be expected. It is of interest that in the past decade, the number of surgical cases in The Children's Hospital of Boston has practically doubled, and the vast majority of these have been elective procedures.

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PIONEER DOCTORS OF INDEPENDENCE COUNTY

The Arkansas State Medical Association convened its 18th annual session here on the 31st ult., Dr. J. T. Jelks of Hot Springs presiding. The business sessions were held in Adler Hall, some 60 members answered roll call. Rev. T. J. Horn opened the session with prayer. About 50 per cent of the present membership are new acquisitions and most of them young doctors. Little Rock, Hot Springs, Fort Smith, Pine Bluff and Batesville furnished professional papers. During the session the American Medical Association was invited to convene at Hot Springs and in that event the next session of this body will be in Little Rock.

The association was most hospitably entertained by our citizens, each vying with the other to make their visit most pleasant. Receptions were held at the residences of Drs. Ewing, W. B. Lawrence and J. B. Fitzhugh. At the receptions, Batesville talent, beauty and chivalry were present to meet and entertain and the social enjoyments were not surpassed by the superb feasts prepared for the occasion.

On the evening of the 1st, a grand reception and banquet, under the auspices of the Independence County Society, was given in the Odd Fellow's Hall. A superb banquet was served on the first floor and the second floor was devoted to dancing. Some 300 guests were present. Gray-haired M.D.s and blushing misses whirled in the giddy dance and staid dames and frolicsome youth ran counter in quadrille and waltz.

Dr. D. C. Ewing, of this place, was honored with the presidency for the present year.

Batesville, in this undertaking, did not in the least lower her standards as a royal entertainer. The entire number of visitors and many of Batesville's ladies and gentlemen boarded the Steamer Woodson for Newport where the party will break up. It was with reluctance they left us and with as much did we see them depart . . . may the time, soon, roll around when they shall be called, again, to test our hospitality.

Dr. Wm. Lawrence was born November 22nd, 1826, in Christian County, Kentucky. His family moved to Fulton, Mo., while he was quite young and he grew up there. He went into the study of medicine when he was 17, reading medicine

under Dr. Robt. Blakely at Fulton, Mo. He next attended the Medical Dept. of the University of Missouri at St. Louis, a student of Dr. Joseph N. McDowell and graduated from that institution in 1847 under Professors McDowell, Johnson, Moore and Leffingwell. After his graduation, he came direct to Batesville, Ark., where he resided continuously until his death in 1892. In 1848 he was married to Miss Sophia Hynson, a niece of Col. John Ringgold who helped write the Constitution of Arkansas. In 1861, Dr. Lawrence went into the Confederate service with Capt. Gibb's company and was later made one of three members of the Trans-Mississippi Examining Board of the Confederate service. Both as a physician and as a surgeon Dr. Lawrence stood at the head of his profession. He was a member since its inception, of the Arkansas Medical Society and served as president in 1881. He was one of the first presidents of the Independence County Medical Society which was organized in 1880. In 1868 the chair of physiology of the Medical Dept. of the St. Louis Medical School was tendered him by Dr. Joseph McDowell, but he refused to accept it. In 1881 he was appointed by Governor Churchill, Surgeon General of the State of Arkansas and was elected to fill the anatomical chair of the Medical Dept. of the University of Arkansas on the organization of the faculty. He was a man of great personal popularity and a genial, kindly gentleman. He made a wide reputation for his expertness in surgical operations and he never refused to visit a patient because he might be poor and the fee doubtful. Dr. Lawrence was the father of Dr. W. B. Lawrence who also served the people of Independence County and was one of its most beloved citizens.

Dr. Sterling W. Allen was a most respected and influential citizen of Floral, Independence County. A native of Wilson County, Tennessee, born in 1822, he received his education in private schools. He obtained his medical degree from Memphis, Tennessee, Medical School and began practicing the same year. He served as a surgeon in the Confederate army under Gen. McRhea and participated in many battles. Aside from his profession he engaged in agricultural pursuits and acquired much valuable land.

Dr. John Farrell Allen, a resident of Batesville, was born in New Madrid County, Missouri, March 29, 1824. His maternal grandfather was a French-Canadian. His paternal grandfather was a Virginian by birth and a sea captain who was lost at sea. His parents were among the

early settlers of Southeast Missouri and had only one son. An incident worth noting is, that for five generations only one son has been born to each family. Dr. Allen received his degree of A.B. in Perry County from a Catholic college. At the age of 20 he began the study of medicine, spending two years under a private instructor, Dr. John Kirkwood. He received the degree of M.D. from the University of Pennsylvania in 1847 and came immediately to Batesville. In 1849 he married Miss Elizabeth Agnew, a niece of the noted educator, A. W. Lyon, who founded the first institution (incorporated) of learning, in the State of Arkansas, known as the Batesville Academy. The doctor has the credit of giving Arkansas College, located at Batesville, its name and was a trustee of that institution and an elder in the Presbyterian Church. The doctor's skill soon received a widespread reputation. He was earnest in his profession, generous in spirit and gave ungrudgingly of his time and means. During the war he was the only doctor for miles around. He was one of the pioneer physicians who could append M.D. to his name, and numbered his friends by his acquaintances. He died September 2, 1901.

Dr. William J. Bell, was born in Alabama in 1835. He received his education in the schools in Lawrence County and in 1857 began the study of medicine. In 1858 he attended a course of lectures in Memphis, Tennessee, and the following year entered upon the active practice of medicine. Dr. Bell built up an extensive practice riding horseback 30 or 40 miles to answer a call.

Dr. H. W. Vaughn, M.D., deserves honorable mention as one of the successful practicing physicians and surgeons of Sulphur Rock, Ark. Born in North Carolina in 1828, he was reared in Fayette County, Tennessee, where he received his literary education, and in 1849 began the study of medicine under an instructor. In 1850 he entered the Louisville Medical College where he took a regular course of lectures. In 1856 he located in Independence County, Arkansas, and for years enjoyed the distinction of being the only college practitioner in the county. He enjoyed a lucrative practice, his patients being among the best class of citizens. He died in the year—

Dr. Lycurgus Adair Dickson was a prominent physician and surgeon of Desha, Independence County, Ark. Born at Murfreesboro, Tenn., in 1827, he was next to the youngest of seven sons. He was left an orphan at the age of 14 and lived with an uncle, G. B. Lanham until nearly

grown. His education was that which he could obtain in the public schools and at the age of 19 he taught school. He continued teaching until 1851 when he began the study of medicine at Gibson County, Tenn. In 1853-54 he attended the Medical Dept. of the University of Nashville, Tenn., and graduated in 1855 from Jefferson Medical School, Philadelphia. He practiced for one year in Gibson County, Tenn., but in late 1856 he came to Arkansas, locating at Desha. During the war he served two years as surgeon of the Eighth Arkansas Infantry, operating in Arkansas, Kentucky and Tennessee. In 1863 Dr. Dixon married Elizabeth Neill, daughter of Judge Henry Neill. Dr. Dixon was the father of Dr. Henry N. Dixon, a graduate of Vanderbilt, and for many years a well beloved physician and surgeon at Paragould.

Dr. Robt. H. Hodges was born in Tennessee in 1850 but was reared and educated in Kentucky. At the age of 23 he began the study of medicine under W. A. Lively, M.D. He was a graduate of the Medical Dept. of University of Louisville and came to Arkansas to practice medicine in 1877, settling in Sulphur Rock. Dr. Hodges was a modest, conservative and unassuming gentleman and won an enviable reputation, not only as a practitioner but as a citizen and neighbor.

Dr. Wm. P. Dobson, a practicing physician and surgeon of Union Township, Independence County, was born in Surrey County, N. C. in 1846. He was of English-Irish descent. He was reared in North Carolina where he obtained a common school education. He obtained his medical education at the University of Louisville, Ky. He began his practice in 1868 but not locating in Arkansas until 1870. In 1875 he married Kittie Williamson (a sister of the late J. W. Williamson). His practice was extensive and lucrative as was the many acres of farm land which were his.

Dr. Henry Logan of Independence County was born in Cleveland County, N. C. in 1847, the son of John R. and Sarah P. Logan. The family was of Scotch-Irish descent. He received his early education at Shelby, N. C. In May, 1864, he enlisted in Company D, Second North Carolina Regiment and served as First Lieutenant until the close of the war, surrendering at Greensboro, N. C. Attending school one year after the war, the following two years he spent teaching, also learned photography and while traveling through North and South Carolina and Mississippi he studied medicine and in 1874 attended a course of lectures at Louis-

ville Medical College. In 1879 he graduated from the Atlanta Medical School and came to Arkansas to practice his profession. He was very successful as a physician and had an extensive practice.

Dr. Finis E. Jeffrey was born in Izard County in 1855. He was one of the younger members of a family of nine sons and six daughters. He was reared on a farm, receiving a good education at the common schools and at the LaCrosse Collegiate Institute, at LaCrosse. He began the study of medicine in 1876 under Dr. O. T. Hunt and graduated in 1879 from the University of Louisville, Ky., after a two-year course. He was in a class of 105, and was one of 10 who stood the best examination, being awarded the degree of honor. Returning to Arkansas he began practice in partnership with Dr. L. A. Dickson of Jamestown and married the doctor's daughter, Maude. He later practiced with Dr. Henry Dickson at Jamestown. Dr. Jeffrey died June 18, 1925.

Dr. Joseph William Case was born in Batesville, Ark., October 26, 1854. He attended St. John's College in Little Rock for one year, while a young man, deciding to make medicine his profession, he went to school in Cincinnati for one year then to Philadelphia where he graduated from Jefferson Medical School in 1876.

After graduation, he practiced for one year in Olney, Ill., being associated with his uncle, Dr. Edmond Ridgeway. Returning to his home town, Dr. Case occupied the same office for over 50 years.

Dr. Case was married twice; first to Miss Maggie Aiken who lived only a short time, leaving one daughter, Miss Maggie Case. Second to Miss Sallie Stinson. There were four children born to this union, two of whom are now living, a son, James W. Case and a daughter, Mrs. A. C. Wilkerson of Newport. Dr. Case's health was unusually good until a few years before his death. He rode day and night, never turning away a call for help. He died December 26, 1924, thus ending a long and useful life of service to others.

Dr. W. B. Lawrence, son of Dr. W. M. Lawrence, was born in Batesville April 22, 1854. After attending public schools in Batesville, he attended school in Little Rock. He received his medical degree from Jefferson Medical School in Philadelphia, graduating in the same class with his lifelong friend Dr. Joseph Case. Returning from school he formed a partnership with Dr. D. C. Ewing which continued until Dr. Ewing's death in 1898.

Dr. Lawrence was a gentleman of the old school, a noble character and very dependable. Always ready to make a call, night or day. He practiced medicine, certainly "not for the love of money." He did a large practice for a small amount of money. People had the habit of paying their bill at the end of the year and often he would tell them their bill was \$6.00 when it should have been many times that amount. In 1907 he was appointed surgeon for the Mo. Pac. R. R. In 1913 he formed a partnership with Dr. Marion Craig which continued for two years. He was county health officer. A member of the Episcopal Church, where he was for years on the vestry, and where his wife, the talented daughter of Judge J. W. Butler, was organist, "Dr. Billy" and "Miss Susie" made their beautiful home a gathering place for the young people of culture and refinement. He died in 1927—impoverished in material things but rich in memories of loved ones gone on.

Dr. James P. Dorr was born in Iowa in 1856 and came to Arkansas in 1870 when his father brought his family to Jacksonport. His father, Dr. Francis A. Dorr was a native of Selsea, Germany, but came to the U. S. early in life. Dr. Dorr began the study of medicine in 1877, his father and Dr. Strauss (a doctor of natural sciences) being his instructors. During the years of 1879-80-81 he attended the Missouri Medical College and graduated in 1881. He located on Dota Creek in Black River Township and built up a large practice. R. C. Dorr, for many years a leading doctor in Batesville, was his son.

D. C. Ewing, M.D., a well beloved physician of Batesville, was born in Tennessee in 1846. The doctor was reared on his father's farm in Madison County, Tennessee, and received his education at the Madison Academy. At the age of 15 he enlisted in Company A, 31st Tenn. Infantry and served 16 months, afterward joining Forrest's cavalry in which he continued until the surrender, although serving in a number of important battles and one of the foremost in the ranks, he was never wounded or captured. After the war he remained in Madison County where he read medicine under Dr. D. M. Spencer and in 1861 entered the Medical Dept. of the University of Louisville and upon graduating in 1871 came direct to Batesville and was associated with Dr. W. B. Lawrence in the practice of medicine. In 1874 he was married to Laura Erwin Cox and built a beautiful brick home (still standing) which was the scene of many of the town's most brilliant social affairs. In 1898 during a windstorm, he walked from his office to

the curb to untie his horse, when some loose bricks were blown from the top of the building upon him, killing him instantly. Dr. Ewing displayed great skill in his profession. He was a devout church member and his love for Masonic work was almost a passion. His personal qualities endeared him to all who came in contact with him.

Dr. Ewing was elected to the presidency of the Arkansas Medical Association in, at the state meeting which was held in Batesville.

Dr. James B. Crane of Batesville was born in Columbia, S. C., in 1826. At an early age he graduated at Columbia College and soon after, completed a course of medicine at Charleston, S. C. After completing his work in college, Dr. Crane at once began to practice medicine and during his long life was a faithful and successful physician. For more than 50 years, he was an elder in the Presbyterian Church. In 1868 Dr. Crane moved to Arkansas and in 1874 located at Batesville at which place he died in 1902, having rounded out a life full of usefulness and leaving the world the better for his having lived in it.

Dr. J. H. Kennerly was born near Winchester, Tenn. in May, 1847. He was one of the first graduates of Sewanee College at Winchester, which college later moved up on the mountain. He later graduated in medicine in 1876 at the University of Louisville, Ky. He located first at Akron, Ark. near Oil Trough ferry on mail route from Batesville to Jacksonport. When the railroad was built about 1883, the town of Newark was built and Dr. Kennerly moved there, building one of the first homes. He later moved to Sulphur Rock and after practicing there several years, in 1890 he formed a partnership with Dr. R. C. Dorr and moved to Batesville. This partnership lasted for over 20 years with always the very best friendly association between the two. At one time Dr. Kennerly was a member of the State Board of Examiners, was county health officer, physician for the Masonic Home and in 1898 he was elected Excellent High Priest of the Grand Royal Arch Chapter of Arkansas.

Dr. Kennerly performed the first operation for appendicitis ever attempted in the county and owned one of the first automobiles. He died at the age of 86 after a short illness.

Dr. Henry Neill Dixon, son of Dr. L. A. Dixon, was born in 1866 near Desha, Independence County, Ark. He was educated in the country schools and later at Arkansas College at Batesville. His medical education was obtained at Vanderbilt and upon graduation, returned to

Arkansas and practiced for several years at Jamestown in partnership with his brother-in-law, Dr. Finis Jeffrey. He later moved to Paragould and formed a partnership with another Dr. Dixon. He became an excellent surgeon as well as general practitioner. He and his partner built and operated the Dixon Sanatorium. Dr. Dixon died December, 1919, at the age of 53.

(Presented by Biography Committee, Woman's Auxiliary to the Arkansas Medical Society, Mrs. Chas. W. Dixon, Chairman.)

PERSONALS AND NEWS ITEMS

A revised list of "Sources of Motion Pictures on Health" has been prepared by the Committee on Medical Motion Pictures of the American Medical Association. This new mimeographed list includes nine pages of addresses of the major loan and rental libraries, the state health departments' film libraries and references to printed lists and catalogs. Copies are available from:

Committee on Medical Motion Pictures,
American Medical Association,
535 North Dearborn Street,
Chicago 10, Illinois.

Dr. William King Jordan, who is now in charge of the division of neurology in the department of medicine at the University of Washington School of Medicine, Seattle, Washington, has been appointed professor of neurology and head of the division of neurology in the department of psychiatry and neurology, effective September 1. Dr. Jordan received his M. D. degree from Harvard Medical School and his advanced training at Montefiore Hospital, New York City, and at Princeton University.

Dr. J. Walker Beck has been named assistant professor in bacteriology and parasitology. He received his Ph. D. degree from Rice Institute in 1950, and during the past year has been conducting research in tropical medicine in Mexico City.

PROCEEDINGS OF SOCIETIES

J. E. Beasley has been elected surgeon of the Blytheville post, American Legion.

Members of the Society who qualify for award of the Fifty-Year button during 1951 are urged to notify Dr. J. H. McCurry, Cash, Secretary of the Fifty-Year Club.

Fred Hames, Pine Bluff, was elected a Fellow of the American College of Radiology at the recent annual session.

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EDITORIAL

SURVEY OF PHYSICIAN'S INCOMES

An analysis of the long-awaited, much-discussed physicians' income survey was made public by the U. S. Department of Commerce in Washington recently.

It showed that physicians in civilian practice in the U. S.—including salaried as well as independent practitioners, but excluding interns, residents and teachers—reported an average net income of \$11,058, before taxes, in 1949.

Neurological surgeons led the field for highest earnings with an average net income of \$28,628. They were followed by pathologists with \$22,284, and gynecologists with \$19,283. Physicians in private practice averaged \$11,858; salaried physicians, \$8,272.

Among independent physicians, about 13 per cent made less than \$3,000 net income in 1949, whereas only about nine per cent of the salaried physicians made so little. On the other hand, about eight per cent of the independents reported more than \$25,000, but only one per cent of the salaried made as much.

Physicians who were members of partnerships reported an average net income of \$17,722 in 1949 as against \$10,895 for those not practicing as members of partnerships.

Work on the survey was done by Frank G. Dickinson, Ph.D., director, and Charles E. Bradley, Ph.D., associate in economics, of the Bureau of Medical Economic Research of the A.M.A., and William Weinfeld, business economist of the Office of Business Economics of the U.S. Department of Commerce.

Dr. Dickinson said that probably the most significant information of the survey is that in the 20-year period since 1929, the average net income of all civilian physicians more than doubled, but this relative increase was practically identical with that for all earners in the general population over the same period.

The increases in the earnings of physicians during the past 12 or 20 years have been due to three factors: a moderate increase in fee schedules, better collections, and greater "output per physician."

Dr. Dickinson said that questionnaires were sent to 125,000 physicians and that 55,000 replied. The government's report is based on an analysis of 30,000 replies, which were unsigned and unidentified.

All of the questionnaires will be returned to the A.M.A. eventually, Dr. Dickinson said, and then a more detailed analysis will be made.

"It is our opinion that the national averages for the broad groups of physicians are generally reliable," Dr. Dickinson said, adding: "We have some doubts about the averages for specialties, for specific cities and for states since the number of replies in each group provide, in some cases, a rather thin sample. Our subsequent analysis of the questionnaires may increase our confidence in these breakdowns."

Among independent physicians, full specialists reported an average net income of \$15,014 for 1949. This was 70 per cent more than the average income of \$8,835 reported by general practitioners. Part specialists were in between with \$11,758, according to the Department of Commerce report.

—Secretary's letter, American Medical Association, July 30, 1951.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE SPECIFICITY OF THE TUBERCULIN REACTION

Esmond R. Long, *The American Review of Tuberculosis*, March, 1951.

Few procedures employed in the campaign to eradicate tuberculosis have been of greater value than the tuberculin test. It has been useful in the diagnosis of tuberculosis in the patient and priceless in studying epidemiology and public health practices in tuberculosis control. It has been used to determine the incidence of development of tuberculous infection in exposed groups, and studies of the tuberculin reaction in nurses have defined the limitations on its specificity and reliability with true tuberculous infection.

In modern medicine specific tests must be quantitative. The Mantoux tuberculin test supplies the quantitative aspect lacking in the earlier von Pirquet. The introduction of purified protein derivative (PPD) is a further refinement. Without a standard tuberculin, analyses of results on the specificity and stability of the tuberculin reaction would have little meaning.

The specificity of the tuberculin reaction has been called into question not a few times. Lumsden and his colleagues in 1939 failed to correlate tuberculin reactions and the calcifications of supposed primary tuberculosis in investigations in two areas. The later correlation of incidence of pulmonary calcification with reaction to histoplasmin and other evidence indicating that the calcifications in question are probably residues of histoplasmosis or other related infections has been a triumph of epidemiologic research. As a result, confidence in the specificity of the tuberculin reaction emerged to a higher level than ever before.

The problem of the relative specificity of low and high doses of tuberculin however is still unsolved. The correlation of strong reactions to weak doses of tuberculin with recent active or progressive tuberculous infection is clear. However, a correlation of weak reactions to strong doses of tuberculin with evidence of past or inactive tuberculous infection has been hard to establish. The assumption has been that allergic levels vary enormously and that high doses of tuberculin may be necessary to bring forth evi-

dence of true tuberculous infection in persons natively sluggish in allergic response, or low in sensitivity because of a long lapse of time since the sensitizing infection.

Numerous facts support this assumption. Racial variations as well as variations in physiologic state, such as those caused by nontuberculous infections, pregnancy, hormonal influences, and nutritional factors are known to modify the intensity of the reaction. The fact that originally weak sensitivity tends to fade with time suggests that the vigorous reactions observed in intimate contacts of persons with open tuberculosis are the aftermath of a constant stimulation of sensitivity by repeated subclinical infections. Aronson noted a rise in sensitivity in persons vaccinated with BCG in contact with cases of tuberculosis. Finally, the low degree of sensitivity conferred by BCG is evidence that the microorganisms themselves are concerned in the individual's level of tuberculin sensitivity.

Thus, reasons are at hand to explain variability in sensitivity to tuberculin. But puzzles have remained. Among these are the weakness and inconstancy of tuberculin reaction in some persons known to be in occasional contact with tuberculous patients, and the frequency, in certain regions, of tuberculin reactions of low intensity in persons not believed to be in contact with tuberculosis.

A paper by Tukey, DuFour, and Seibert throws light on the first of these problems. Serial tuberculin tests in a large number of student nurses tested at three-month intervals in their training course revealed a small cumulative increase in the incidence of reactions to the first-strength test dose of PPD (0.00002 mg.), which might be attributed to true tuberculous infection, and also a fluctuation in sensitivity to the second dose (0.005 mg.), from negative to positive and again to negative, in many students who never reacted to the first dose. The repeated injections themselves appeared to be ruled out as a cause of sensitivity. A recent analysis led the authors to conclude that these changes may be due to slight infection and gradual recovery.

However, another possibility remains open. In the same city, Teague and Placentra called attention to the fact that during the last 20 years studies with the standard tuberculin PPD in representative high schools have shown a steady and striking decline in the incidence of reaction to the first dose of PPD, but little drop in the incidence of reaction to the second dose. The drop in reaction to the first dose could be correlated with the decline in mortality from tuberculosis, but the persistence of sensitivity to the second dose may well be due to organisms other than the tubercle bacillus. This view recalls the problem of the "no visible lesion reactor" in cattle who are sometimes actually "skin lesion reactors" suffering from minor infections of the skin, apparently due to acid-fast bacteria of very low virulence occurring in soil and grass.

The suggestion that bacteria other than the tubercle bacillus may be responsible for non-specific reactions to tuberculin in man has been made by others. An exhaustive analysis of a series of tuberculin reactions in nurses in many states, by C. E. Palmer and his associates, has shown extraordinary geographic variations in the pattern of reaction. They showed a significant correlation between tuberculosis mortality rates and frequency of reaction to the first dose of tuberculin. This was consistently higher in urban than in rural communities, which suggests that contact with other human beings is concerned. Reactions to the second dose in subjects failing to react to the first were not correlated with other evidence of tuberculous infection or with the frequency of reaction to the first dose of tuberculin. Within certain geographical areas, the level of second-dose sensitivity was remarkably uniform despite substantial variations in the percentages of first-dose reactions. These facts led the authors to the conjecture that an organism different from, but allergenically resembling, the tubercle bacillus is concerned. The geographic pattern and rural relationship suggested that a warm and moist climate and sub-tropical vegetation may be important. No one will disagree with the authors' suggestion that the "results of this study would appear to justify a serious search" to learn the nature of the agent concerned.

Thus two important possibilities in explanation of weak and fluctuating reactions to tuberculin remain. The first is that these reactions may be responses to intermittent slight infections with true tubercle bacilli. The loss of sensitivity in reactors exposed to tuberculosis after the contact is discontinued and the low level and not infre-

quent waning of sensitivity after BCG vaccination furnish strong evidence that this possibility is a real one.

The other explanation is infection by acid-fast microorganisms other than the tubercle bacillus. Evidence in favor of this is indirect, but suggestive. A direct attack on the problem is possible through experiments on sensitization of man by such bacilli and investigation of low-sensitivity reactors for infestation with acid-fast bacilli that might be responsible for the reaction.

INVOLUTIONAL MELANCHOLIA AND DEPRESSIVE STATES: RESULTS OF TREATMENT OVER A 5-YEAR PERIOD

LOUIS A. COHEN, M. D.
Little Rock

After a 5-year experience in the treatment of depressive states in the State of Arkansas the author feels that results obtained in treatment with electric shock methods are worthy of note. Two hundred and twenty-four cases of nervous illnesses which have been classified as melancholia or depressive states have been treated during this past five years. Prior to 1946 electric shock therapy was given only at the Veterans Hospital in North Little Rock and at the State Hospital in Little Rock.

In March of 1946 the author instituted this type of treatment on the general medical floors of the Baptist and St. Vincent's Hospitals in Little Rock. The nursing problems, the dangers of suicide and the lack of grills on the windows in these rooms, soon made the dangers obvious and the hospitals felt that treatment should not be given. Therefore in January of 1947 a nursing home was opened, with security provisions, providing the care for these patients.

In general these cases can be described as having a superfluous mental and physical depression as the predominating findings. Other symptoms noted in this series of 224 cases include the following: sleeplessness, irritability, loss of appetite, loss of weight, anxiety, apprehension, agitation, fears of impending disaster, delusions of sin, ideas of unworthiness, fears of food contamination, delusions of infidelity, death wishes, ideas of needing to atone for sins, fears of loved ones suffering because of "me", self-depreciation and self-accusation.

In the more severe cases the patients frequently walk around wringing their hands, moaning "Oh my God! Why did this happen to me.

Save me. Help me. etc." Consciousness is not ordinarily clouded; orientation and memory functions are usually well preserved.

The early symptoms of melancholia are usually not hard to recognize and the average practitioner should have little difficulty in making the correct diagnosis. Some of these patients may have additional findings such as hypertension, arteriosclerosis, diabetes, urinary disorders, gall-bladder disease, etc. These conditions, however, may cloud the issue, as treatment for them seldom has any definitive effect on the melancholia.

The recognition of melancholia by the general practitioner is extremely important as the depressed component responds so favorably and dramatically to electric shock therapy that suicide and much real suffering can be avoided. Out of this series only 14 cases failed to respond to treatment and these were the more chronic cases with duration of symptoms from 1 to 12 years prior to institution of treatment. The threat and danger of self-destruction is always present in patients with melancholia. Early treatment will prevent suicides, make for better nutrition and early return home and resumption of former activities. It should be emphasized that while electric shock was at first used in the treatment of severely mentally ill patients, the more gratifying results are now obtained in nonpsychotic depressions. Many practitioners are reluctant to recommend and patients to accept therapy because of this misunderstanding.

Relatively few medical contraindications are encountered. A man of 56 who had only one lung was treated satisfactorily. Twenty-four patients with blood pressures over 180 systolic were treated. A man 62, who had multiple partially healed fractures, following a suicidal jump from a third story window, was treated successfully eight months after his injuries. Eighteen patients past 70 years of age were treated with excellent results. Three successful outcomes were in patients who had concomitant pernicious anemia which was treated at the same time. Any associated illness may be treated at the same time the patient is undergoing electrical shock therapy. The only contraindication to treatment include the severe arthritides, cardiac decompensation and acute toxic febrile diseases. The latter two conditions are first treated and then electric shock therapy started. Most of these patients are past 50 years of age and not the best risks for an intensive therapeutic procedure. In acutely

and compulsively suicidal patients there are no justifiable contraindications.

The literature on back injuries due to electric shock therapy indicates that about 40% of these cases X-rayed showed some compression of the bodies of the sixth or seventh thoracic vertebrae. This condition was found in this series but is usually not symptomatic. When the patient complains of backache which is localized to one vertebral spine we do have an X-ray made but have not interrupted treatments of any case. Moreover follow-up studies over a period of years have failed to show definitive or significant pathological sequelae.

Many cases, where the suicidal danger is not great, and proper supervision can be provided in the home, have come back and forth to the clinic on an out-patient basis. One should not overlook the value of avoiding the State Hospital stigma when evaluating the risk of utilizing out-patient treatments.

Summary: (1) 224 cases of depressive illness mostly classified as melancholia are reported. (2) Excellent remissions were produced in from 90 to 95% of cases by the use of electric shock therapy. (3) Contraindications to electric shock therapy are very few. (4) Serious injuries are rarely encountered. (5) 18 patients over 70 years of age were treated satisfactorily. (6) Hospitalization involved about 3 weeks in the average case. (7) Out-patient therapy may be given when adequate home supervision can be provided. (8) The threat of suicide can be overcome in practically every case. (9) The dramatic reversal of a suicidal, depressed, agitated, delusional, miserable state of suffering to that of a cheerful, calm, content individual in a matter of 3 or 4 weeks is a very gratifying picture to observe. Prior to the onset of electric shock therapy these patients would be hospitalized, treated and perhaps recover in from 4 months to 40 months in contrast to the same person recovering with shock therapy after only 6 to 8 treatments.

RANDOM THOUGHTS OF THE SECRETARY

August 22nd. Guest of the gracious Chamberlains who honor Louis Byars, the plastic surgeon of Saint Louis, with whom we enjoy pleasant social acquaintance but with whom we differ vigorously upon the subject of irradiation.

August 23rd. With the first breath of invigorating Ozark autumn weather bringing its relief from the recent torrid days driving northward on 71 to look over Rice Memorial Hospital at Rogers where most cordial physician-hospital relationships are in effect, visiting briefly with Dean and Jennings, and homeward in a cool, cool evening.

MANAGEMENT OF LESIONS OF THE BREAST*†

JAMES H. GROWDON, M. D.
Little Rock, Arkansas

The proper management of breast lesions is becoming a larger and more complex problem daily. As a result of cancer educational programs, women are becoming more conscious of changes which occur in their breasts and are seeking consultation more frequently and often at a much earlier date. This is fortunate of course, because with present methods of treatment early diagnosis of cancer is essential if we are to cure a high per cent of persons suffering from this disease. On the other hand, diagnosis is more difficult. The physician may find himself in a dilemma as to whether he is dealing with a physiological process, a benign or malignant tumor, or a patient suffering from cancerophobia.

How well we as a group are meeting the present situation may be gained by some recently reported studies. Leach and Robbins¹ found that 50% of their patients with mammary cancer had received improper advice from previous physicians. Haagensen² found 27% of the patients of a group studied at Presbyterian Hospital had received improper advice from the first physician consulted. These are indeed disturbing revelations.

Perhaps one reason for these errors is the lack of general awareness as to the accuracy of clinical interpretations of a breast mass. L. V. Ackerman³ in a carefully conducted study of clinical and pathological correlation in breast cancer found that fourth year medical students were capable of an accurate diagnosis of a breast lump in only 55% of cases. This he aptly describes as little better than tossing a coin. Experienced examiners in a cancer hospital were clinically correct in only 70% of cases. Fitts⁴ in a similar study at the University of Pennsylvania found about the same correlation.

The need for an accurate pathologic diagnosis of every predominant lump in the breast is apparent. This entails excision or biopsy, with gross and microscopic study. However, many unnecessary and mutilating operations may be performed unless one obtains an understanding of the various lesions which occur, and just what consti-

tutes a mass necessitating biopsy.

The breast is not a static organ but changes occur in its parenchyma from birth through senility. These changes are largely the result of hormonal influences which cause variations in the lining epithelium, the ducts, lobules, and acini, as well as the surrounding connective tissue. Besides the general trend seen from birth and puberty to senility, there is a monthly variation during each menstrual cycle, and of course the profound changes seen during pregnancy and lactation. Further, all parts of the breast may not respond identically. Imbalances of response to stimulation and regression may result in a variety of conditions such as mastodynia, the several variants of chronic cystic mastitis, fibroadenoma, etc.

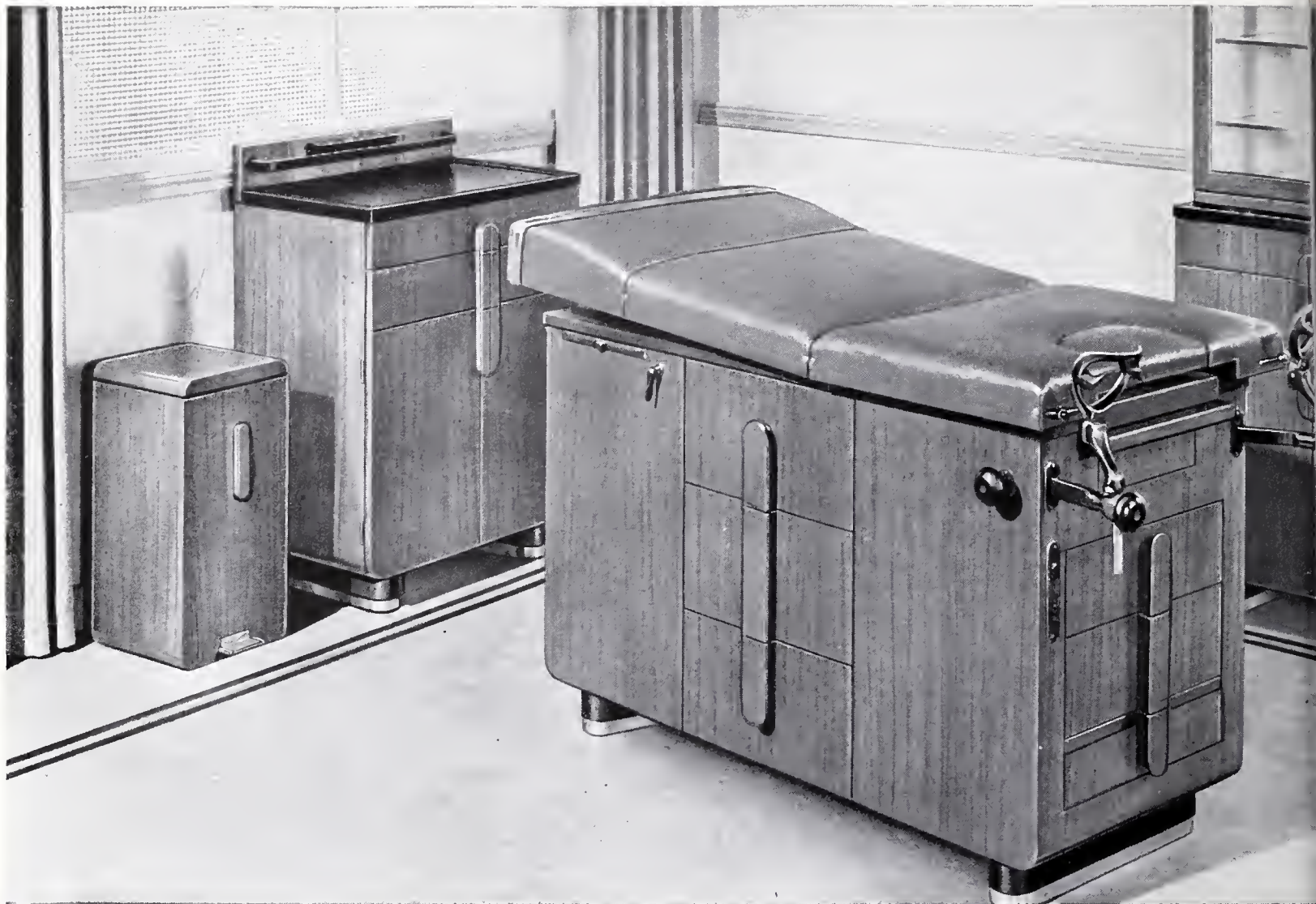
Observation of a breast lesion should as a rule be limited to a short (2-4 weeks) period to observe the effect of these cyclic changes or to observe for a brief time a possible inflammation. Whenever there is a localized area in the breast persistently varying in consistency from remaining mammary tissue an excision or biopsy is required. This concept of a "dominant lump" has been repeatedly emphasized by Stout.⁵

Instead of considering in detail a complete classification of breast lesions it is preferred in this discussion to present certain features concerning the more common conditions seen in office practice. Perhaps these features may best be illustrated by several hypothetical cases of a typical nature.

The first problem is that of the young woman in her late teens or twenties who complains of a lump in her breast. This is usually the only symptom present, although tenderness or mild pain may be associated. On examination one finds the typical firm freely movable mass, not attached to adjacent structures and most obviously a fibroadenoma. The remaining breast parenchyma is normal. The error here is usually in dismissing the whole problem as a trivial matter and in telling the patient there is nothing to worry about or to "forget it". This is particularly a dangerous procedure in patients of older age groups. Regardless of age such a lesion may be a very early cancer before the classical signs have developed. If the diagnosis of a fibroadenoma be correct such a course may lead to future difficulties that could have been simply avoided by excision. First, such a tumor may gradually enlarge, necessitating a more deforming operation at a later date. Second, during pregnancy such a tumor may rapidly enlarge to even huge proportions as a result of hormonal stimulation. Difficulty in distinguish-

* Read before Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 23, 1951.

† From Depts. Oecology and Surgery, University of Arkansas School of Medicine.



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ing this from a malignancy may be encountered. Not only would a more formidable operation be required, but it would entail operating at an inopportune time. Lastly, a certain small per cent of these fibroadenomas may undergo malignant change—usually to a sarcoma.

The second illustrative case is again a young woman in her twenties, more often unmarried or recently married and without children, who complains principally of a tender area in one or both breasts associated with or without what she describes as a lump. On questioning it is usually discovered that symptoms are just present or are more pronounced before or during menstruation. Physical examination discloses one or more tender areas in the breast, the upper outer quadrant being the most common site. The breasts are usually below average in size, although some engorgement may be present and the whole breast feel somewhat granular on palpation. There is either no mass discernible or there is a diffuse thickening which can not be sharply delineated from the surrounding breast tissue. These cases of mastodynia nearly always represent a physiologic disturbance related to the changes in the breast parenchyma caused by hormonal stimulation during the menstrual cycle. The thickened area which was palpated is an area of increased response with periductal edema. These areas change markedly or even entirely disappear over the course of several periodic examinations made at different periods of the menstrual cycle, the so-called "phantom tumor." Pregnancy and lactation often entirely alleviate the difficulty. All these patients need is reassurance, although they may represent an early stage of the disease to be described in the next case.

The third case to be considered is the patient in her late thirties or early forties, unmarried, or if married having had no or only one pregnancy. Lactation, if having occurred, has been inadequate and interrupted. This patient's complaints are usually a lump or lumps in one or both breasts. The breasts may be painful and sometimes the patient complains of a discharge from the nipple of a yellow, green, or dark brown color, although the latter may not be discovered until the nipple is compressed during physical examination. There often are associated menstrual abnormalities. On examination one usually notes flaccid or pendulous breasts. There is a relative absence of supporting fat so that the breast parenchyma is more prominent. This emphasizes the presence of a diffuse nodularity

imparting a shotty feel on palpation. The nodules are usually 2 to 3 mm. in diameter. Both breasts are more often but not necessarily involved. This case represents a typical picture of chronic cystic mastitis or Schimmelbush's disease of which there are a number of variants. The basic pathological changes include varying amounts of cystic dilation of the duct system, epithelial hyperplasia, round cell infiltration and fibrosis. Endocrine response factors here again perhaps play a predominant role in the etiology. Management requires reassurance, a brassiere offering good support for the breasts, and emphasis placed on the necessity of periodic follow-up examinations. These cases may develop other features of the disease which require more active treatment. Further, carcinoma is more apt to develop here than it is in the woman who does not have these changes in her breasts.

Any time such a case presents or develops a "lump" which is different from the remainder of the breast surgical investigation is necessary. Often only an area of increased fibrosis or sclerosis or an enlarged cyst will be found, the latter especially in patients around 45 years of age. The danger of malignant change necessitates this investigation. One patient with chronic cystic mastitis whom we followed at Ellis Fischel Cancer Hospital in Columbia, Missouri, over a number of years had four such excisions of benign predominant masses. The fifth excision of a seemingly similar mass was made only upon the insistence of the patient. This was a cancer when examined after removal.

Aspiration of cysts as a routine measure of diagnosis or treatment is mentioned only to be condemned. An associated cancer may be masked by the cyst and the physician lulled into a false sense of security upon the aspiration of clear cystic fluid. In a few selected cases this procedure may be justified.

The last problem to be considered is the patient complaining of bloody discharge from the nipple. This symptom means epithelial hyperplasia. While most often it is the result of a benign intraductal papilloma, bleeding should always be considered of grave importance as there may be an associated carcinoma. In some reported series up to 40-50% of cases were due to cancer.

If a benign process is the underlying factor there are frequently multiple areas of involvement. A mass may or may not be present, if so, it is generally just beneath the areola, up to one centimeter or so in diameter and should always

be excised for microscopic examination. Such a mass may be difficult to demonstrate if the blood has recently been expressed. If no mass is present, pressure on one quadrant of the breast may reveal the involved segment. This quadrant should be searched for a papilloma and if none found be removed for multiple microscopic sections. If localization is not possible a simple mastectomy is indicated, especially with advancing age groups. Very few patients will need such radical treatment. Local operations may be followed by recurrence because of the multiplicity of the process but are indicated especially in younger women. Careful follow-up is essential.

The typical cancer patient with the classical picture of cancer has been purposely omitted from this discussion. We are all only too well acquainted with this picture. It is the early cancer, often masked by other abnormalities, or mimicking a benign lesion, which is today the best point of attack in order to cure more cases of this dread disease which about 4% of all women will develop. One caution, certainly, usually fulminating cancers may be easily confused with an ordinary acute inflammation, the so-called inflammatory cancer. Any acute inflammatory lesion of the breast which does not resolve promptly demands microscopic examination. All breast abscesses when drained should have a portion of the abscess wall removed as a biopsy.

In summary, it should be reiterated that:

1. Clinical impressions of the diagnosis of a breast mass are, at best, unreliable.
2. Any predominant lump differing from the rest of the breast tissue must be removed for further study.
3. To quote Dr. Ackerman "Look and see" must be substituted for "Wait and see".

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BOOK REVIEW

The Neuroses—Diagnosis and Management of Functional Disorders and Minor Psychoses: By Walter C. Alvarez, M.D., Professor of Medicine, Emeritus, Mayo Foundation, University of Minnesota; Emeritus Consultant in Medicine, the Mayo Clinic. 667 pages. Philadelphia and London: W. B. Saunders Company, 1951. Price \$10.00.

The author's intense devotion to the cause of the so-called "neurotic" is well-known to medical audiences throughout America. This volume is a veritable compendium of the diagnosis and treatment of functional disorders and will be of interest to all who treat patients.

A Text-Book of X-Ray Diagnosis by British Authors in four volumes—Second Edition—Edited by S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director X-Ray Department, Westminster Hospital, Radiologist, Royal Chest Hospital, London. Volume I. 434 pages with 439 illustrations. Philadelphia and London: W. B. Saunders Company, 1951. Price \$12.00.

This volume is an exhaustive and complete presentation of the roentgen diagnosis of diseases and lesions of the head and neck. It continues the high readability and generous illustrative content of the other volumes in the set. The entire four volumes are a most important addition to the library of the roentgenologist.

QUINIDINE IN DISORDERS OF THE HEART: By Harry Gold, M.D. Pp. 115. Price \$2.00. New York: Paul B. Hoeber, Inc., 1950.

This is a concise text and discusses the current employment of quinidine in disturbances of cardiac rhythm.

A Text-Book of X-Ray Diagnosis by British Authors in four volumes—Second Edition. Edited by: S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director, X-Ray Department, Westminster Hospital; Radiologist, Royal Chest Hospital, London. Volume II. 702 pages with 605 illustrations. Philadelphia and London: W. B. Saunders Company, 1951. Price \$15.00.

In this volume the circulatory and respiratory systems are exhaustively presented with the general excellence which typifies this text.

A Text-Book of X-Ray Diagnosis by British Authors in four volumes. Edited by: S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director, X-Ray Department, Westminster Hospital; Radiologist, Royal Chest Hospital, London. Volume III. 830 pages with 694 illustrations. Philadelphia and London: W. B. Saunders Company, 1950. Price \$18.00.

This volume of the four-volume set deals with the diagnostic studies of the abdomen. As with the other volumes, the subject is thoroughly covered. Numerous excellent illustrations assist the reader to understand the lesions under discussion.

Principles and Practice of Obstetrics: By J. P. Greenhill, M.D., Attending Obstetrician and Gynecologist, The Michael Reese Hospital; Obstetrician and Gynecologist, Associate Staff, The Chicago Lying-In Hospital; Attend-

ing Gynecologist, Cook County Hospital; Professor of Gynecology, Cook County Graduate School of Medicine. New, 10th Edition. 1020 pages, with 1140 illustrations on 864 figures, 194 in color. Philadelphia and London: W. B. Saunders Company, 1951. Price \$12.00.

This book represents the teachings and experience of recognized authorities in the field and is a standard reference work. Recent developments in management of obstetric difficulties are included and the text has been carefully revised.

The American Illustrated Medical Dictionary: By W. A. Newman Dorland, A.M., M.D., F.A.C.S., Lieut.-Colonel, M.R.C., U. S. Army; Former Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association. New, 22nd Edition. 1736 pages, with 720 illustrations, including 48 plates. Philadelphia and London. W. B. Saunders Company, 1951. Price \$10.00.

Twenty-two editions have not dimmed the popularity and acceptance of this excellent dictionary with its many complementary plates and tables. The format is materially improved.

Clinical Heart Disease: By Samuel A. Levine, M.D., F.A.C.P., Clinical Professor of Medicine, Harvard Medical School; Physician, Peter Bent Brigham Hospital, Boston; Consultant Cardiologist, Newton-Wellesley Hospital; Physician, N.E. Baptist Hospital. 4th edition. 556 pages, 192 figures. Philadelphia & London: W. B. Saunders Company, 1951. Price \$7.75.

This book is a worth-while volume for the general practitioner as well as the heart specialist, giving the opinions of the author's experience.

A Textbook of Medicine—Edited by: Russell L. Cecil, M.D., Sc.D., Professor of Clinical Medicine, Emeritus, Cornell University, New York. Robert F. Loeb, M.D., Bard Professor of Medicine, Columbia University, New York. Associate Editors: Alexander B. Gutman, M.D., Professor of Medicine, Columbia University, New York; Walsh McDermott, M.D., Associate Professor of Medicine, Cornell University, New York; Harold G. Wolff, M.D., Associate Professor of Medicine (Neur.), Cornell University, N. Y. New, 8th Edition. 1627 pages, 204 figures, 40 tables. Philadelphia & London: W. B. Saunders Co., 1951. Price \$12.00.

The eighth edition of this text continues to be a valuable one-volume treatise on medicine.

Natural Childbirth. By Frederick W. Goodrich, Jr., M.D. Pp. 168. Price \$2.95. New York: Prentice-Hall, Inc., 1950.

This manual is written for expectant parents giving emphasis on the natural process of pregnancy and delivery. Exercises for relaxation with instructions on diet and prenatal care are given. The book endeavors to give the parents an understanding of the entire delivery procedure.

Cerebral Palsy. By John F. Pohl, M.D., Orthopedic Surgeon, Michael Dowling School for Crippled Children, Minneapolis. Saint Paul: Bruce Publishing Company, 1950. Price \$5.00.

In this text the author outlines the basic problem of treatment and the methods whereby the child is taught to assist himself in overcoming the handicap of this crippling disease.

PERSONALS AND NEWS ITEMS

Dr. and Mrs. R. G. Kramer, Fort Smith, spent a recent vacation in Minnesota.

John Watkins, Little Rock, recently addressed the Cabot Lions club on "Vision."

Dr. and Mrs. R. M. Eubanks, Little Rock, spent a recent vacation in Arizona.

Dr. and Mrs. T. P. Foltz, Fort Smith, spent a recent vacation in Cleveland.

Dr. and Mrs. Ben H. Pride, Fort Smith, spent a recent vacation in California.

Earle H. Hunt, Clarksville, recently addressed the Methodist Conference at Waldron on "Rural Health."

P. L. Hathcock, Fayetteville, spent a recent vacation in Yellowstone National Park and other western points.

Harrison Butler, Fayetteville, recently visited at Bogalusa, Louisiana.

Dr. and Mrs. Melvin McCaskill, Little Rock, recently vacationed at Gulf Coast points.

Fred Odgen, Fayetteville, spent a recent vacation in New Orleans and on the Mississippi Gulf Coast.

S. A. Southall, Lonoke, recently received the Fifty-Year emblem of the Masonic lodge at a ceremony held by the Lonoke lodge.

E. F. Brewer, Augusta, was honored by the Business and Professional Women's Club on the occasion of his 84th birthday July 22nd.

The Pulaski County Medical Assistant's Association is sponsoring refresher courses on Human Relations, by Kenneth G. Lewis and Melvin Adams, State Department of Education; Medical Terminology, by Mrs. Elizabeth D. Marsh, University of Arkansas School of Medicine; Nursing Techniques, by Barbara Belzner, R. N., Little Rock Vocational School, and Office Procedure and Management, by K. W. Menman, Administrator, University Hospital, Marguerite LeGrande, Superintendent, Trinity Hospital, Gaston G. Fulmer, Executive Secretary, Pulaski County Medical Society, and E. Eugene Mapes, C. P. A.

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INTRAOCULAR FOREIGN BODIES: LOCALIZATION AND SURGICAL TREATMENT*

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[Traumatic injuries to the eye caused by metallic agents frequently leave intraocular foreign bodies in their wake and must always be suspected in accidents in which striking, grinding or cutting force is applied to metal.] The heavy industrialization and thousands of mechanical implements have multiplied the striking of metal on metal and in each accident case the possibility of an intraocular foreign body must be eliminated.

History

[There is no condition in which the history is more important and helpful in making a diagnosis. Most of these cases have a medico-legal aspect and it is essential to know the exact details of the accident.] It should be determined what the patient was doing; the metals being used; any previous injury and, if possible, the vision prior to injury. Have the suspicious source of metal brought to the office for inspection. This will help determine the size and magnetic properties and could influence the planned surgical approach.

Physical Examination

[The vision must be recorded and the lid and globe searched for any break in conjunctiva. The cornea should be stained and a detailed slit lamp examination completed. The pupil should be dilated and an ophthalmoscopic examination done, paying special attention to any hemorrhage or vitreous opacities. A transilluminator should be used in an attempt to locate any opening in the iris. By using these procedures it may be pos-

sible to follow the course of the foreign body and evaluate impending complications.]

Localization

[Once the probability of an intraocular foreign body has been established the X-ray localization should be done.] The exact localization is most important since the treatment or surgical intervention is dependent upon this location. This requires close correlation between the clinical and X-ray findings. There are many techniques used to locate an intraocular foreign body. The popularity of the different methods will vary depending upon each section of the country. During the year 1950 we had twelve cases and the Sweet method of localization was used exclusively. It is satisfying to know that your selected technique of localization has been proven dependable. Many eyes have been lost because of improper localization resulting in unnecessary manipulation and operative procedures. Other eyes are lost as result of improper localization leaving the foreign body inside the eye when it could have been removed.

[The method used to localize a foreign body, to be accurate, must meet certain requirements. First, it goes without saying, that it must be fully understood and the technique mastered by the person making the examination. Second, it must localize the body in THREE dimensions in relation to a fixed point on the eye globe, the center of the cornea. To accomplish this, the principle of the stereoscope must be employed, making two exposures, and tube shift, while the globe remains stationary. The Sweet method meets these requirements and is the method most widely used in this country.]

Routine Procedure After Localization

[Both eyes should be bandaged until the patient is taken to the operating room. This prevents motion and possible complications from intraocular hemorrhage. When there has been an intraocular hemorrhage or enough time has elapsed since the accident for infection, there is severe pain and large doses of narcotics may be required.]

* Read before Section on Eye, Ear, Nose and Throat, Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

[Antibiotics may be given systemically. The combination of penicillin and streptomycin may be used. Sulfonamide preparations are probably absorbed more readily by the ocular tissues.]

[Tetanus antitoxin should be given unless a sensitivity reaction is present.]

Thyroid H antigen is the most effective foreign protein agent in our hands and we give at least two intravenous injections of twenty-five or fifty million units.

We believe that an intraocular foreign body is an emergency and should be treated as such, however, an accurate localization and planned operative procedure is much more important than rushing the patient directly to the operating room.]

Surgical Procedure

[The surgical removal from the anterior chamber may be relatively easy. This usually requires a keratome incision. The magnet may be applied to the keratome handle and foreign body removed.]

[Foreign bodies in the lens substance present a special problem. If it is known to be iron or copper it should be removed as soon as possible to prevent siderosis or chalcosis and probable enucleation. Because of the slow metabolism of the lens other types of foreign bodies may be tolerated for years, and thus remain until the formation of the cataract is complete.]

[In the removal of particles from the vitreous chamber there are those who attempt to pull the foreign body into the anterior chamber using the giant magnet.] We believe [this method should be used only if there has been damage to the lens. In most cases a posterior scleral incision is made with the cataract knife after the line of incision has been outlined with point cauterization. The radial incision is placed over the pars plana and away from muscle attachments. In the pars plana area the blood supply is decreased and the choroid and retina are more firmly attached. Coagulation helps to prevent retinal detachment. Mattress sutures are pre-placed on each side of the incision for traction and control. The Lancaster hand magnet is first used to extract the foreign body. If unsuccessful the giant magnet is used for extraction.]

[Non-magnetic foreign bodies offer more of a problem than magnetic. There are three general methods of attack and each method has its limi-

tations. When the vitreous is clear the removal may be accomplished by direct view with the ophthalmoscope.] The biplane fluoroscope has been used but the equipment is not usually available and offers some hazard to personnel from radiation exposure. An ocular endoscope has been devised for the removal of foreign bodies under direct view.] Here again the state of the vitreous will determine the usefulness of the instrument. Direct view offers the least trauma and instrumentation. When this method cannot be used enucleation usually follows.

Complications

[The complications from this surgical procedure are very important from the standpoint of vision loss and compensation. Intraocular hemorrhage, endophthalmitis and secondary glaucoma must be considered among the early complications. Retinal detachment may occur at any time and sympathetic ophthalmia, although not a common condition, must be considered at all times. Siderosis and chalcosis from retained copper and iron fragments are distinct possibilities and may present medico-legal problems.]

Post-Operative Care

Absolute bed rest for one week and limited activity for at least three weeks is essential. The pupil is kept dilated and pin hole glasses worn to limit ocular motility.]

Safety Measures

[The incidence of this severe ocular injury can be reduced and practically eliminated by stressing the importance of wearing protective goggles.] In larger industries where good safety programs are in force this injury is very rare. In the smaller isolated groups, such as we find in the lumber and oil industries, direct supervision is very difficult and these groups have furnished most of our cases. Next in incidence is from mechanical and building activities on the farm.

First Aid and Initial Care

The physician giving first aid should:

1. Examine the eye for any break in conjunctiva.
2. Test the visual acuity in each eye.
3. X-ray all questionable cases.
4. Dilate the pupil with a mydriatic.
5. Bandage both eyes and limit the activity of the patient to the minimum.

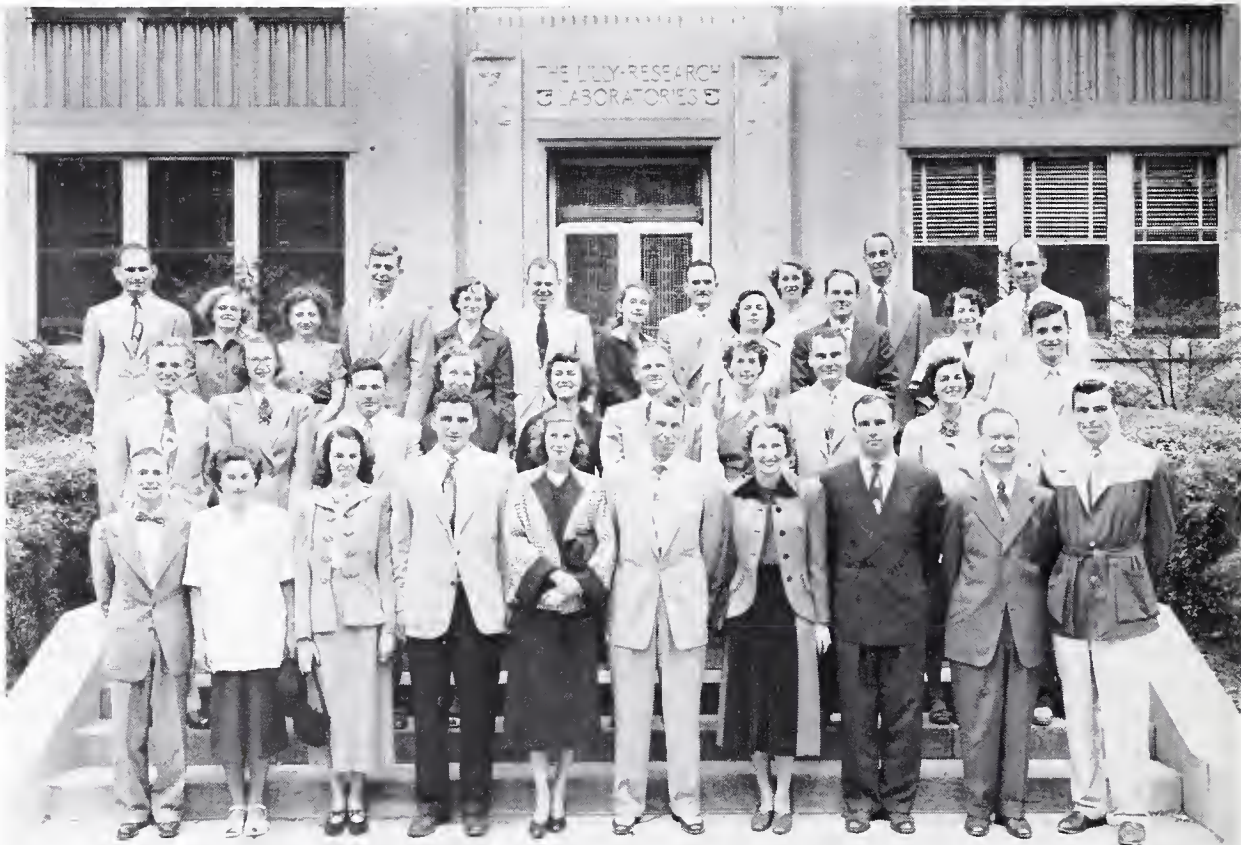
If an intraocular foreign body is found the patient should be hospitalized immediately for the special attention required.

Intraocular Foreign Bodies During Year 1950

Patient	Age	Date	What Happened	Size and Location	Operative Procedure and Results
B. N. B. White Male Age 23 1-1-50			Hammering on chain of drill rig Metal entered left eye perforating cornea	4mm x 3 mm x 5 mm 2mm above horizontal plane 4mm temporal to vertical plane 8mm posterior to cornea	Giant Magnet removal Keratome incision limbus Linear lens extraction Vision: Gross movements
G. G. White Male Age 55 1-6-50			Hammering on grader blade Metal entered cornea left eye	2mm x 1mm x 3mm Through cornea protruding into anterior chamber	Magnet removal enlarging corneal wound Vision: Normal.
M. F. White Female Age 21 2-1-50			Using hammer and nail Metal entered left eye Limbus wound at 5:00 o'clock	2mm x 3mm x 2mm 4mm below horizontal plane 5mm nasal to vertical plane 8mm posterior to cornea	Posterior—scleral incision Vision: Normal
J. W. F. White Male Age 25 5-16-50			Cutting wire Piece entered left eye Limbus at 5:00 o'clock	15mm x 2mm x 2mm 4mm above horizontal plane 4mm temporal to vertical plane 8mm posterior to cornea	Giant Magnet removal Posterior sclerotomy Endophthalmitis Enucleation
W. M. C. White Male Age 39 8-2-50			Injury 5-24-50 while using drill bit	1mm x 1mm x 2 mm 10mm below horizontal plane 5mm temporal to vertical plane 15mm posterior to cornea	FB found during routine examination. Confirmed by X-ray Vision normal. No operative procedure
D. H. White Male Age 22 8-31-50			Using hammer on motor Metal entered left eye Scleral wound at 9:00 o'clock	1mm x 1/2mm x 1/2mm 2mm below horizontal plane 3mm temporal to vertical plane 18mm posterior to cornea	Posterior sclerotomy FB not removed Magnetic? Traumatic retinitis Vision: 20/200
V. B. White Male Age 40 9-6-50			Using hammer building fence Metal entered left eye, 9-4-50	3mm x 1mm x 1mm 3mm below horizontal plane 12mm temporal to vertical plane 10mm posterior to cornea	Posterior sclerotomy FB removed Giant Magnet Endophthalmitis Enucleation
C. H. White Male Age 22 10-20-50			Using hammer to put handle on axe Metal entered left eye Cornea at 3:00 o'clock	2 1/2mm x 1 1/2mm x 1mm 1mm below horizontal plane 8mm temporal to vertical plane 7mm posterior to cornea	Posterior sclerotomy FB removed Giant Magnet Vision: Normal
R. M. White Male Age 7 12-27-50			Hitting one hammer with another Metal entered left eye	3mm x 2 mm x 1 mm 3mm above horizontal plane 4mm nasal to vertical plane 15mm posterior to cornea	General anesthesia Posterior sclerotomy FB removed Giant Magnet Prognosis good for normal vision
A. S. M. White Male			Carpenter driving nail Hole through iris	1mm x 1/2mm x 1/2mm on horizontal	From localization and fundus examination

Patient	Age	Date	What Happened	Size and Location	Operative Procedure and Results
	Age 22		Media clear permitting retinal wound examination.	18mm posterior 4mm temporal	FB location believed to be between retina and sclera near macula Systemic treatment Vision: 20/200
J. A. R. White	Male Age 42		Using chisel FB entered left eye Scleral wound at 9:00 o'clock	2mm x 1 mm x 3mm 3mm below horizontal 4mm nasal to vertical plane 15mm posterior to cornea	Posterior sclerotomy FB removed magnet Prognosis for occupational vision: Fair

Summary	Bibliography
<div>1. A detailed history and physical examination is essential.</div> <div>2. One stereoscopic method of localization should be perfected. The Sweet method is recommended.</div> <div>3. The routine procedure for the treatment of intraocular foreign bodies is given and the complications are mentioned.</div> <div>4. The important measures for prevention and the immediate first aid care is suggested.</div> <div>5. Recent case histories are presented in outline form.</div>	<div>1. Callahan, Alston: Intraocular Foreign Bodies, Surgery of the Eye, 3-40, 1950.</div> <div>2. Thorpe, H. E.: Ocular Endoscope, Tr. Am. Acad. Ophthal., 1934.</div> <div>3. Anthony, D. H. and Fisher, D. F: Intraocular Foreign Bodies, Tenn. Med. J. 44: 130-136, 1951.</div> <div>4. Verhoeff, F. H.: Concerning Magnetic Intraocular Foreign Bodies and Their Removal, Am. J. Ophth., 15: 685, 1932.</div>



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ERYTHROBLASTOSIS FETALIS (HEMOLYTIC DISEASE OF THE NEWBORN) * †

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Erythroblastosis, or as it is more properly known today, "Hemolytic Disease of the Newborn," is best understood through the historical approach. Actually, there are two main threads to the story, each beginning independently and merging together in the year 1941. These stories have been admirably told by Potter* in her excellent monograph on "Rh".

The first of these historical resumes begins with the Englishman, Ballantyne, who wrote a book in 1892 on "Diseases and Deformities of the Foetus" including "general dropsy of the foetus." Under this heading he describes the typical anemia, the increase in the nucleated red cells in the baby's blood, the placental hypertrophy, and the familial incidence, so well known to us today. In addition he differentiated the disease from syphilis. In 1909 Buchan and Comrie recognized "icterus gravis neonatorum," following observation of each of two families with several infants presenting severe jaundice. In 1912 the German, Rautman, introduced the term "erythroblastosis" because of the known outpouring of immature cells into the blood stream of children with general dropsy, or with icterus gravis. In 1918 Ecklin recognized a third clinical manifestation of the disease, namely anemia. We know, however, today that anemia is rare in a newborn who has never been visibly jaundiced.

In 1932, Diamond, Blackfan and Baty introduced the concept of Erythroblastosis Fetalis as a single disease with various clinical manifestations. They concluded that the fundamental disturbance lay in the hemopoietic system and that differences among "universal edema of the fetus, with erythroblastosis, icterus gravis with erythroblastosis and anemia of the newborn with erythroblastosis," were caused by variations in severity of the inciting agent.

Six years later in 1938, Darrow summarized the

known facts which must be accounted for by an acceptable explanation of the disease, as follows:

1. The apparent absence of any hereditary factor.
2. The birth of healthy children might precede birth of an erythroblastotic child.
3. Frequent familial tendency.
4. The apparent good health of the parents.
5. The apparent absence of significant factors in prenatal history in most cases.
6. The association of edema, grave jaundice and anemia of the newborn.
7. Clinical symptoms.
8. The finding of a large liver and spleen and of the blood changes noted at autopsy.
9. The erythroblastosis.

Purely from deductive reasoning, she concluded that the only possible explanation for all of the above was some form of immune reaction causing destruction of fetal erythrocytes! Truly this was an amazing deduction and quite an interesting prediction in the light of what we know today.

Now, we must turn time back to 1901 and review the second chain of discoveries that ultimately led to the final solution of the etiology of this amazing disease. In that year Landsteiner discovered in human red blood cells two antigens and named them "A" and "B". These antigens, which for point of emphasis we repeat are contained within the erythrocyte, were found to be able to incite antibody response. This discovery formed the basis for blood grouping and made modern blood transfusion possible. Twenty-seven years elapsed before Landsteiner and Levine discovered another system of erythrocytic antigens, and named them "M" and "N". The M and N system of antigens, however, is only weakly antigenic and therefore incite little, if any, antibody response. In 1940 Landsteiner, now working with Wiener, announced the discovery of still another antigen in the red blood cells of the Rhesus monkey, and taking the first two letters, named it "Rh". They also found that the Rh factor was present in 85 per cent of all Caucasian people. Later it was realized that the Rh factor was only one member of an antigenic system known as Rh—Hr, or to carry on the nomenclature originally begun in 1901, the CDE system of antigens. Now, it is known that there are at least three Rh factors. Rh₁ is comparable to C and is found in 70 per cent of the Caucasian people. Rh₀ is comparable to D and is found in 85 per cent of Caucasians. Rh₁₁ is comparable to E and is found in 30 per cent of Caucasians. Much subsequent work has shown that the Rh factor

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† From the Department of Obstetrics and Gynecology of the Southwestern Medical School of the University of Texas.

* Potter, Edith L.

Rh—its relation to congenital hemolytic disease and to intra-group transfusion reactions.

Yearbook Publishers, Inc., Chicago, 1948.

tends to be present in approximately 100 per cent of all races other than Caucasian. It has even been suggested that if Rh negative persons are found in any race other than white, one must consider the strong possibility of admixture of Caucasian blood.

The two stories, that of erythroblastosis fetalis, and that of the various antigenic substances found in human red blood cells were brilliantly correlated by Levine, Burnham, Katzin and Vogel in 1941. They discovered that 93 per cent, or 142, of 153 mothers giving birth to erythroblastotic children were Rh negative. Also all of the 153 husbands and all of the 153 children were Rh positive. The consistency of data of this discovery was so remarkable that it was almost too good to be true. However, it has subsequently been confirmed.

Hemologic Features

Any consideration of the hemologic features of the Rh factor must include knowledge of the following facts:

1. The antibodies against the Rh factor are never a normal constituent of human blood.
2. They appear only when the Rh factor is injected into an Rh negative person. As a corollary to this it should be stated that since the Rh factor is inseparably bound to the red blood cells this implies that the actual erythrocytes of an Rh positive person must gain access to the blood stream of an Rh negative person.
3. Repeated exposure to Rh positive erythrocytes is necessary to produce immunization. This may come about in two or more ways, but the chief one concerned with hemolytic disease is the leakage of fetal red blood cells across the placental barrier into the maternal circulation. Sufficient leakage to immunize the mother seldom occurs with the first pregnancy. A second method of immunization results from blood transfusion. By this means, an overwhelming inoculation can occur when blood from an Rh positive donor is given to an Rh negative recipient.
4. Individuals vary in their ability to produce antibodies and some never do.
5. An Rh positive father may be either homozygous, always producing Rh positive children, or heterozygous, producing Rh positive children half the time.

Clinical Features

Originally this disease was named "Erythroblastosis Fetalis" because of the outpouring of immature red cells into the fetal blood stream in frantic efforts to restore the depleted blood supply. More recently there has been a distinct tendency to change the name to "Hemo-

lytic Disease of the Newborn." This infers the presence of maternal antibodies specific for the red blood cells of the fetus, and capable of destroying them. Until blocking antibodies were discovered, often these maternal antibodies were only inferred and many times their presence could not be proved. Originally maternal serum and fetal cells were mixed together with the cells suspended in saline. Often times agglutination did not take place and yet the baby had clinical evidence of hemolytic disease. This was not explained until 1945 when Coombs, Mourant and Race found that in some instances the antibodies would attach themselves to the fetal red blood cells without agglutinating them. They also discovered that when these so-called "blocking antibodies," which took up most of the antigen were mixed with human globulin that agglutination took place. Practically, if a saline suspension of cells shows no agglutination in water the fluid is removed and replaced by 20 per cent albumin solution. In such an event the blocking antibodies no longer continue to block.

Symptoms and Signs

There are three variants of the disease as we saw from the historical resume. The anemic variety seldom appears by itself, but always is present in all varieties. The occasional child with anemia only, has about a 75 per cent chance of survival, even if nothing is done. About 50 per cent of those who develop severe jaundice survive. On the other hand, children born with generalized edema, as a result of hemolytic disease, do not survive. In addition to these obvious features, there is definite enlargement of the liver and spleen and a marked increase in the number of immature red cells in the circulation. In the normal newborn we may expect to find 5 to 10 erythroblasts or normoblasts among 100 red blood cells. In hemolytic disease of the newborn this number is materially increased. Pathologically one finds the presence of extramedullary areas of erythropoiesis in various organs and tissues.

Obstetric Implications

From the clinical standpoint it is obvious that an Rh positive man must marry an Rh negative woman in order to produce the proper association for erythroblastosis. Even so, the first born is almost never affected for the obvious reason that, during the first pregnancy, too few fetal red blood cells leak into the maternal circulation to produce antibody response sufficient to harm the child. Moreover, the Rh positive husband may be heterozygous, the resulting child

in utero Rh negative, and no isoimmunization whatsoever occurs during the first pregnancy. On the other hand, if the Rh negative mother previously received a transfusion of Rh positive blood by inadvertence, she almost certainly developed a strong antibody response. In such tragic situations, there is little likelihood of a normal, living child being born to union with an Rh positive man, unless he is heterozygous.

A fact worthy of consideration is that **maternal immunization is permanent once established.** Translating this into clinical terms it means that after one baby with hemolytic disease is born, the mother may expect each subsequent baby to have hemolytic disease of increased severity, unless her husband is heterozygous. If a patient loses a child because of hemolytic disease and examination of the husband's serum shows him to be homozygous the only hope this woman can have for successful future pregnancies is to be inseminated with serum from an Rh negative man.

When a definite antibody response has been elicited in an Rh negative woman, either by repeated pregnancies, or transfusion, it becomes important to know whether or not the Rh positive husband is homo or hetero-zygous. In the former event he carries genes for the Rh factor in both members of the pair of chromosomes and will produce entirely Rh positive children. If he is heterozygous, there is a chance half of the time that the product of conception may be Rh negative.

Another clinical feature being considered today is the theoretical possibility that quantities of fetal blood may be injected into the maternal circulation by manual placental removal at delivery or at curettage following incomplete abortion. In other words, instrumentation affecting the term, or the immature placenta should be withheld insofar as possible in Rh negative women.

It should be pointed out that immunization seldom becomes so severe during the first half of pregnancy as to destroy the child. This statement holds for the tenth, as well as for the first pregnancy. Therefore, spontaneous interruption of pregnancy during the first semester seldom, if ever, occurs as a result of isoimmunization against the Rh factor.

Prevention

There are two possibilities for prophylaxis: The prevention of immunization, and the prevention of hemolytic disease after immunization has occurred. In prevention of immunization, the factor so important it transcends all else,

is avoidance of transfusing an Rh negative woman whose obstetric career is ahead of her, with Rh positive blood. We should also be cautious about curettage for incomplete abortion in an Rh negative woman and equally, should avoid forceable removal of the placenta following term birth.

Theoretically possible, efforts at prevention of hemolytic disease after immunization is known to have occurred, have been unsuccessful to date. Haptenes have been given to the mother in vain attempts to use up all of her antibodies by combination with them. Other endeavors have been equally unsuccessful.

Prognosis

In 1950 Diamond and his co-workers, Vaughn and Allen, reported 12 years' experience with 539 cases of hemolytic disease of the newborn at the Boston Lying-in Hospital. From the practical standpoint, they found that no baby will be affected where the proper setup is in full force until the mother is sensitized, that is until she has had one or two children. Even so, if the husband is heterozygous there is a fifty-fifty chance after she has been sensitized that the baby will not be affected.

The outlook for the recovery of the first Rh positive child, AFTER sensitivity has been established is good. Stillbirth is rare and about 30 per cent of these children, born after known immunization has occurred, show no evidence of clinical disease at birth. The likelihood of recovery of an erythroblastotic infant is inversely related to the degree of anemia and to liver and splenic enlargement. These workers also found, after discovery of the blocking antibodies, that babies developing kernicterus generally are those born of mothers with high titers. In other words, if the antibody titer is low during pregnancy there is less likelihood that the child will develop kernicterus. Finally kernicterus is more common among prematurely born children than in those born at term.

Management of Pregnancy

Every pregnant woman should have an Rh determination. If she is negative her husband should be examined. If he is positive then she should have antibody titers run from about the middle of pregnancy onward. If the antibody titer increases there is virtually nothing that can be done but certainly we have learned through bitter experience that induction of labor vaginally or by cesarean section before the 38th gestational week does the child no good and in fact favors development of kernicterus. To put

this in a different type of statement, one may say that nothing is gained by the early termination of pregnancy and much may be lost. Finally since the antibodies are contained in the mother's blood serum, they diffuse readily into the breast milk. A mildly erythroblastotic but surviving child should not nurse at his mother's breast but should be artificially fed.

Management of the Child

Above all, the child with hemolytic disease born alive must be transfused. All of these children are anemic and need blood. Obviously blood given to them must contain no specific Rh antibodies. There is some evidence to indicate that blood from a female donor is preferable to that from a male. Female Rh negative blood of course should be taken from a donor with no previous opportunity for sensitization.

More recently bold attempts to remove most of the child's blood and replace it, the so-called "exchange transfusion" in which approximately 90 per cent of the baby's blood is replaced if 500 cubic centimeters of donor blood are used, have seemed to offer some help. The opinions expressed by various authors are conflicting, but the accumulated evidence seems to suggest that exchange transfusion with blood from a female donor is of some benefit in the salvage of life, and definitely is of benefit in the prevention of kernicterus.

Summary of Obstetric Management

1. In every pregnant woman
 - a. Determine the Rh status
 - b. Inquire regarding previous transfusion
2. If Rh negative, type the husband
3. If he is Rh positive
 - a. Determine antibody titers monthly, beginning at mid pregnancy, later more frequently. Be sure the Coombs test (albumin solution) for blocking antibodies is used
4. In event of rising titer
 - a. Do not interrupt pregnancy before the 38th week
 - b. Be prepared with apparatus, appropriate blood and a skilled operator for exchange transfusion at birth
5. With a surviving child
 - a. Examine a blood smear for immature forms
 - b. Determine Rh status of the child
6. If the child succumbs
 - a. Perform autopsy, looking especially for hepatosplenomegaly
 - b. Examine a blood smear
 - c. Determine the Rh status of the child

CLINICAL APPLICATIONS OF ACTH AND CORTISONE*

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A new era in medicine was ushered in by Hench and his associates by the remarkable discovery of the use of Cortisone and ACTH in the treatment of rheumatoid arthritis and of Cortisone in rheumatic fever. The catalytic stimulation of this discovery upon investigative effort is evident by the deluge of reports about these two hormones that have flooded the medical literature. The initial wave of enthusiasm that greeted these two substances has just about reached its zenith and we are now entering the phase of pessimism and condemnation. Both emotional responses are apparently necessary for the final true evaluation and classification of important new therapeutic and investigative agents in medicine. It is the purpose of this report not to join in with the pessimists but rather make a plea for more intensive selection of patients and disease states where Cortisone and ACTH are to be used as therapeutic agents and to re-emphasize the importance of these substances as research tools in the quest for etiology of the collagen diseases and for a more fundamental understanding of endocrine metabolism.

The mechanism of action of Cortisone and ACTH as therapeutic agents is unknown although the metabolic and biochemical and immunologic effects upon the experimental animal and human have been studied and reported by Thorn and a number of other investigators. As yet there does not exist complete conformity of opinion as to these various effects but continued research efforts will undoubtedly clarify and unify some of the conflicting reports.

Let us briefly review some of the reported effects of these hormones.

ACTH, of course, produces its effect by stimulating the adrenal cortex to increase the secretion of adrenal steroids including Cortisone and closely related compounds. Cortisone administration adds directly to the level of adrenal steroids in body fluids and it also suppresses the secretion of endogenous steroids by inhibiting pituitary ACTH production. What are the various effects of the adrenal steroids?

1. Long continued administration of ACTH or Cortisone may depress thyroid function. It is possible that this depression of thyroid activ-

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ity may be explained by the partial inhibition of the thyroid stimulating hormone.

2. ACTH and Cortisone oppose the action of insulin and tend to reduce the utilization of carbohydrate and/or result in hyperglycemia and in increased demand for insulin. In some people diabetes may result if insufficient insulin is produced.

3. ACTH and Cortisone may tend to depress gonadal function possibly through partial inhibition of pituitary gonadatropin secretion.

4. ACTH has a more marked effect upon water, sodium, and chloride retention than does Cortisone. When both hormones are given in large doses over a prolonged period of time they will induce a hypokaleimic and hypochloremic alkalosis.

5. Both hormones tend to increase urinary nitrogen excretion and may produce a negative nitrogen balance. There are reports in the literature which suggest effects upon urinary excretion of calcium, phosphorus and uric acid and creatinine.

6. Both hormones have been shown to produce marked changes in the metabolism of the brain as evident by electroencephalographic patterns and marked psychic changes in the form of euphoria, hypomania and depression. There are even a few reports of convulsive seizures following hormonal therapy.

7. An excess of Cortisone may produce muscular weakness and paralysis. This is probably caused by the alteration in the distribution of Potassium and chloride between cells and extracellular fluid.

8. The adrenal steroids seem to have the ability to alter the allergic tissue reaction that follows union of antigen and antibody. Effects of adrenal steroids upon antibody formation in man have been conflicting. The adrenal steroids apparently are not effective as bactericidal or bacteriostatic agents. Animal experiments seem to indicate rather an intensification of invasiveness of bacteria in Cortisone treated animals.

9. Both hormones apparently have some effect upon the function of the hematopoietic system. Increase in the red blood cell count and hemoglobin have been reported. Leukocytosis has been observed with an associated drop in lymphocytes and eosinophiles.

10. The adrenal steroids have been shown to produce a decrease in fibroblastic proliferation in wounds inflicted in Cortisone treated animals. Delayed wound healing has also been reported in some patients who have been treated for long periods with large doses of ACTH.

11. ACTH and Cortisone treated patients have been observed to develop hyperpigmentation, acneiform eruptions, hirsutism, rounded facies and flattening of keloid scars.

This broad spectrum of effects which ACTH and Cortisone may initiate is certainly impressive and rather awe-inspiring. Very few substances known to medicine can equal the profound and varied effects of these two hormones. Obviously one would encounter few of the above cited actions if one is governed by intelligent caution in the use of ACTH and Cortisone and if one is keenly aware of the potent potentialities of these two hormones.

At this time one could not honestly classify these hormones as therapeutic agents and one should more accurately consider these hormonal substances as investigative tools. More time and more intensive effort is needed to clarify and unify the many conflicting opinions. It is true from reports that these drugs have proved useful in some people in such disease states as panhypopituitarism, anorexia nervosa, idiopathic hypoglycemia, acute rheumatic fever, exfoliative dermatitis, acute gouty arthritis, status asthmaticus, serum sickness, acute inflammatory diseases of the eye, and rheumatoid arthritis. Also some observers have reported variable degrees of success in such disease states as psoriasis, disseminated lupus erythematosus, dermatomyositis, periarteritis nodosa, acquired hemolytic jaundice, vasomotor rhinitis, urticaria, nephrotic syndrome, and leukemia.

The difficulty we encounter in the evaluation of these hormones as therapeutic agents may be demonstrated in a number of disease states where we used Cortisone and ACTH as therapeutic agents.

No one can deny the dramatic symptomatic relief brought about by Cortisone and ACTH in acute rheumatic fever and it is of extreme interest that these hormones possess the anti-rheumatic qualities of salicylates. At this time, it would be difficult to determine which form of therapy is superior. The questions that still await answers are: Are these hormones curative? Will their use prevent the progression towards established heart disease? Will these hormones prevent or decrease recurrences of acute rheumatic fever? If these hormonal substances do not, then their preferred use is highly questionable for salicylates therapy is much more economical and the factor of safety is much greater. One must be keenly aware of the potential danger of sodium and water retention when treating patient with acute rheumatic

fever who are in incipient failure. Since a number of the rheumatics enter the hospital with bacterial infections one must take proper precautions through the use of appropriate antibiotics to prevent generalized bacterial invasion which patients are receiving Cortisone or ACTH.

We have treated 8 patients with acute rheumatic fever. All of these patients responded well symptomatically, i. e., their joint pains, and fever subsided rapidly. Where we encountered great difficulty was the evaluation of the degree of residual carditis. Even though in some patients objective evidence of carditis was lacking yet the auscultatory findings still pointed to an active myocarditis. It is this last point many times that can influence interpretation of results.

S. V.—She developed marked evidence of A-V block which on therapy

C. V.—He had a nice symptomatic response but two months after cessation of therapy this youngster had evidence of rheumatic heart disease.

G. H.—He was a very mild case. His response was good.

J. S.—He was also a very mild case and his response was good.

P. B.—The quality of her heart tones were still impaired.

B. D.—This youngster had previous rheumatic heart disease. Again symptomatically he improved but the quality of his heart tones did not return to normal and of course his previous valvular lesions were still present.

R. M.—This youngster had established rheumatic heart disease and had a rather hectic course. Associated with his carditis he also had a pneumonitis which we felt was probably a rheumatic pneumonitis. He did not respond to full salicylate dosage but did respond to oral Cortisone. He required one course of 24 days and immediately experienced an exacerbation when he was taken off the hormone but responded rapidly to a second course of 25 days. Again when he left the hospital the quality of his heart tones was still impaired although symptomatically he was fine.

B. W.—This youngster had a severe fulminating rheumatic infection also associated with pneumonitis which was thought to be rheumatic in origin. He, however, responded well to courses of salicylates as well as hormones. When this youngster left the hospital he had no evidence of active carditis.

What would be the treatment of choice then?

We feel that since salicylates have proved their effectiveness as antirheumatic agents and since the hormones, Cortisone and ACTH, also seem to possess antirheumatic qualities, a combination of salicylates and hormones might be a rational one because of the potential dangers inherent in this disease. This approach is suggested until more experience is obtained with these hormones and the true etiology is revealed.

We have agreed with school of thought that regards Sydenham's chorea as a rheumatic manifestation but if we examine the results in our 3 cases treated they are very disappointing. Now why Sydenham's chorea does not apparently respond to hormonal therapy is a mystery.

In rheumatoid arthritis the problem of evaluation of the therapeutic efficiency is equally difficult. One is faced with a chronic disabling disease that responds dramatically to hormonal therapy more so in the early acute stage rather than in the long standing stage as shown by some recent work. The symptomatic remissions accomplished in most instances persist only while the hormonal therapy is continued. Upon discontinuation of the therapy there is usually a prompt relapse and sometimes to a disease state which is more disabling than before the initiation of therapy.

We have treated 4 youngsters with rheumatoid arthritis with good symptomatic responses. We are maintaining two of these youngsters in a partial state of remission—one upon 40 mgm. of Cortisone per day, and one upon 25 mgm. of oral Cortisone per day. In these youngsters we justify our continued therapy because it did transform both youngsters from a stage of invalidism to one of partial ambulation. Of course we must keep in mind that we still do not know the complete story about the prolonged administration of these hormones and patients who are kept upon prolonged therapy should be followed with great care.

The effect of the hormones upon acute and chronic glomerulonephritis is rather disappointing. In acute glomerulonephritis the results are again disappointing. In fact by comparing results of chronic nephritis treated with measles, the results would seem to indicate that it is superior to either ACTH or Cortisone. Again here we are dealing with a disease of unknown etiology whose course may be marked by spontaneous remissions so that results of any form of therapy will be very difficult to evaluate until more experience is possible. I think we could state that hormonal therapy at best will only offer remissions and

certainly not cures in chronic glomerulonephritis.

We have treated a number of hematopoietic disorders with the hormones and again the results certainly have not been striking. The interesting thing is that these hormones do apparently exert some effect in some of these conditions.

We have gained a little experience in the use of Cortisone and ACTH in a number of other disorders. The beneficial effects are rather difficult to evaluate or were entirely lacking.

We have used either Cortisone or ACTH in 5 youngsters with bronchial asthma. All youngsters responded but it is very difficult to evaluate the results because other therapy was used concomitantly such as parenteral fluid therapy, antibiotic therapy for infections, etc.

One extensive burn second degree and third degree involving over 50% of the body. This youngster died suddenly as a result of aspiration of vomitus. This case is of interest in that after one week of hormonal therapy this child developed a septicemia due to the hemolytic streptococcus. This again points to the fact that these hormones do not prevent bacterial invasion of the body.

Two cases of infantile atopic eczema were treated with Cortisone. In one there was no effect and the other case showed questionably mild improvement.

One case of lupus erythematosus disseminated was treated just with Cortisone, then with ACTH, then with a combination of the two. The course, however was steadily downhill ending in death. It might be of interest to point out that the L.E. phenomenon became negative while upon hormonal therapy.

Three cases of dermatomyositis were treated with rather disappointing results. One youngster died during therapy; one youngster went home with no improvement. The last youngster's nutritional state improved somewhat.

Even though the potential untoward side effects are many we have encountered relatively few in our experience. Some of the most frequently encountered side effects.

Even though these side effects are rather benign, I think it is important to re-emphasize again that there is inherent danger in the use of these hormones indiscriminately and one should always select the patients with great care and be prepared to follow such patients very carefully, both clinically and with the aid of the laboratory.

Admittedly, our experience has been rather

limited and we are not justified in drawing any sweeping dogmatic conclusions. I think though our experience does seem to indicate that the indications for Cortisone and ACTH therapy are rather limited and their proper category might well be as tools in the field of metabolic research studies. Even though realizing therapeutic success with ACTH and Cortisone might be disappointing, the promise of a possible fundamental understanding of the etiology of these baffling diseases makes the introduction of these hormones one of the great achievements of our century.

RESOLUTION

WHEREAS, an all-wise providence has removed from our midst, Dr. Melvin Edgar McCaskill, who was our valued co-worker in both the Arkansas and Pulaski County Medical Societies, having been President of both Societies, we the members of the Pulaski County Medical Society mourn and regret his sudden departure.

WHEREAS, as a physician in the field of general medicine and surgery he rendered great service to the public and won distinction in this field, and the respect of his colleagues. He had enjoyed a large and varied practice in this community and throughout the State. He was beloved by all of his patients and all who knew him because of his skill and kind manner in handling them. He had served on many committees and for many years on the State Board of Health and always gave of his time generously and with wise counsel. He had received many other honors and distinctions too numerous to mention.

THEREFORE BE IT RESOLVED, that the Pulaski County Medical Society express to his family this token of the esteem in which he was held by the members of the society and express its heartfelt sympathy to the family the untimely loss which the society has sustained.

BE IT FURTHER RESOLVED, that a copy of this resolution be made a matter of record in the minutes of this meeting; that a copy be sent to the family and a copy sent to the Journal of the Arkansas Medical Society. This resolution is respectfully submitted to the members of the Pulaski County Medical Society by your committee.

R. J. Calcote, M. D.,
Robert Caldwell, M. D.,
Lamar McMillin, M. D.

THE JOURNAL

OF THE

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EDITORIAL

BARBITURATE AND BENZEDRINE LAW

Attention of members is called to the provisions of Act 184, 1951 Legislature, now being enforced by the Arkansas State Board of Health. This law prohibits the sale of barbiturates, derivatives and compounds, except those to be nasally or externally and by wholesale drug houses to retail drug stores and by either wholesale or retail drug firms to hospitals, and by a legally qualified physician, dentist or veterinarian. All orders for these drugs shall be written and in duplicate. Copies of orders or prescriptions shall be preserved for at least two years and shall be made available for inspection by any officer of the state board of health or by the state board of pharmacy. A separate written order or pre-

scription shall be required for each sale of the drugs. An oral prescription may be given but must be confirmed by proper written prescription to the druggist within 72 hours by the physician.

It is unlawful to prescribe or dispense any of the drugs except in the course of professional practice and except upon a personal contact of the person for whom or to whom such drugs are prescribed or dispensed, such personal contact to be made upon the occasion of the writing of each such prescription or the making of a dispensation of the drugs.

Possession of the drugs, unless lawfully acquired, is prohibited. Regulations for administration of the act and its enforcement may be made by the Arkansas State Board of Health. Penalties for violation range from a fine of one hundred to five hundred dollars or to an imprisonment of not over one year, or both. The Act became effective February 28th, 1951, and members are cautioned to observe the requirements of the law in the prescribing and dispensing of these drugs.

MEDICAL SOCIETY OFFICERS— "MEDICAL POLITICIANS"?

Frequently we hear medical society officers sneeringly referred to as "medical politicians." For about ten years this writer has been fairly close to the local medical inner sanctum planning (or plotting, if one believes all medical society activities have a sinister implication). During this time, there have been a number of "smoke-filled room" sessions. True, issues were discussed, argued, fought about, and decisions reached, even if bitterly and hesitantly agreed upon. True, many times there was more heat than light displayed in these conferences; and certainly in many instances, personalities weighed more heavily than facts.

But in thinking back, we cannot recall a single situation wherein the good of the entire membership was penalized because of a selfish or flippant action taken by these "medical politicians." Our officers are chosen in a most democratic manner. Each member has an opportunity to write his own ticket. From these cumulative "write-ins," a committee (of past Presidents) picks the several Members who seem to be most popular. Then the entire membership elects those who appeal to the voters. Nothing could be more fair or equitable; **no method could more certainly eliminate the charge that "the gang who run things" put up and elect their man!**

Of course, it is a thrill for any man to be so

elected. But let us analyze his commitments. We have interviewed several of our past Presidents; it is no exaggeration to say they spend at least one-fourth of their time in carrying out their responsibilities. Naturally it is an honor, but also it is a chore. At times it becomes a vexatious chore, entirely without recompense except for the personal satisfaction of a job well done.

On a larger scale, we are amazed at the schedule of Dr. John W. Cline (President of the A.M.A.). We were privileged recently to have a few minutes with him. From his itinerary, he will be lucky if he gets to spend even fifty per cent of his time at home. When away from home he has a schedule which would kill a marathon runner. For instance: Breakfast with one group (and not just to eat), something to be discussed; a radio-program to rehearse and a "disc to be cut"; a talk to an auxiliary group; a service-club luncheon to address; a formal, scientific or quasi-scientific paper to read; another group conference; a rapid change to evening clothes, always a cocktail-hour and dinner with still another speech; and so, on and on, day after day.

To fill this bill a fellow needs the front of a Dale Carnegie, the physique of an Atlas, and a fairly hefty bankroll (or an organization back home to carry on the bread-and-butter work). And all this merely for the sake of the honor, the satisfaction, and the organization.

It is small wonder, then, that this writer has little truck with those who gripe out of the corner of their mouths about "the medical politicians." Personally, we salute anyone willing to make the many sacrifices necessary to fully carry out his responsibilities, if he truly does a conscientious job. Financial sacrifices certainly, home-tie sacrifices absolutely, leisure-time sacrifices necessarily, and all the time listening to the gripes, the complaints of those who won't lift a little finger, except to find fault.

Everyone should think twice before he has too much bad to say of our "Medical Politicians!"

Vincent Williams, M. D.

—Jackson County (Missouri) Medical Society Bulletin, October 10, 1951.

MEDICAL SCHOOLS SET ENROLLMENT RECORD: MORE DOCTORS GRADUATED

Medical schools of the United States in the last year took further steps to protect the future

health of the nation by enrolling the largest number of students in their history.

This was revealed in the 51st annual report on medical education in the United States and Canada, compiled by the Council on Medical Education and Hospitals of the American Medical Association. The report, published in the current (Sept. 8) Journal of the American Medical Association, was prepared by Dr. Donald G. Anderson of Chicago, secretary of the council, and his aides, Dr. Francis R. Manlove and Mrs. Anne Tipner.

A total of 26,191 students were enrolled in 79 approved schools in the United States for the 1950-51 academic year. This compares with the previous high record of 25,103 in the year before, an increase of 1,088 (4.1%). Since 1941, when there was an enrollment of 21,379 students in 77 approved schools, the increase has been 4,812 (22.5%).

The report also disclosed that the academic year just opening up will see a continuation of this increase in medical education because of the enrollment of a record freshman class. It is estimated that about 7,400 new students will enter medical schools this fall, compared with the previous record of 7,182 a year ago.

Also important from a future health protection standpoint was a survey which showed plans were under way in many states for the opening of additional medical schools and for the expansion of existing facilities.

"Significant progress is being made toward resolving the financial problems of the medical schools," the report also said. "Funds available to the schools during 1951-52 will total approximately \$109,600,000, which represents an increase of \$36,000,000 in the last four years. In addition to the usual sources of funds, the schools this year are receiving grants from the National Fund for Medical Education and the American Medical Education Foundation. However, serious financial problems remain for a number of schools."

There were 6,135 physicians graduated last year, as compared with 5,553 the year before and the highest for any year except 1947 when with the termination of an accelerated program several schools graduated more than one class, bringing the year's total to 6,389. In the seven years before World War II, the annual graduations from approved schools ranged from 5,089 to 5,377.

Privately-owned schools enrolled 14,191 (54.2%)

of total) students last year, as against 13,781 (54.9%) the year before. Enrollments in state and municipally-owned schools were 12,000 (45.8%) and 11,322 (45.1%), respectively.

The trend toward exclusion of out-of-state students by state and municipally-owned schools continued. Of the total of 3,470 students admitted, only 236 (6.9%) were nonresidents as against 249 (7.2%) the year before.

Privately-owned schools admitted 3,707 students, of whom 1,951 (52.6%) were nonresidents, as against 1,905 (53.1%) in the preceding year.

Women enrolled totaled 1,564 (5.9% of total), compared with 1,806 (7.2%) in the preceding year and a high of 2,183 (9.1%) in 1947. The total, however, was higher than for any year prior to 1946. Freshmen women numbered 376 (5.3% of the class), as against 387 (5.5%) the year before. The number of women graduates was 468 (7.6%) as compared with 595 (10.7%) in 1950 and a record high of 612 (12.1%) in 1949.

Veterans enrolled numbered 14,528 (55.4% of all students), as against 16,541 (65.9%) the year before. Seventy-four of the veterans were women, a decrease of 25. Veterans enrolled in the freshman class numbered 2,867 (39.9%) as against 4,152 (58.9%) the year before. This was the smallest group of veterans to be enrolled in the freshman class since the end of the war.

Negro students enrolled in 46 United States schools totaled 658 (2.5%), compared with 647 (2.6%) the year before in 42 schools.

The schools estimated that about \$16,300,000 (21.9% of budgets) will come from tuition fees. Last year, tuition fees provided \$15,200,000 (22.5%). The remainder of their requirements will come from other sources, including endowments, grants and gifts.

Seventy schools were able to supply information on the scholastic record of those accepted for admission. This showed that approximately 40 per cent of the students entering medical school last year had "A" averages, another 40 per cent had "B" averages and almost 20 per cent had averages of "C" or lower in their college work. A survey in the previous year indicated that only 9.1 per cent of the freshmen had "C" average.

The report pointed out that this refutes the charges made in irresponsible quarters that students who do not maintain a straight "A" average in college have little or no chance of being admitted to medical school.

The report cited the widespread interest in

the development of new medical schools. The University of California at Los Angeles this fall was admitting its first freshman class, two years earlier than originally planned. Mississippi was expected to break ground soon for a four-year school. West Virginia is preparing plans for a school at Morgantown. New Jersey was expected to call a special session of the legislature to locate a new school and to provide for its financing.

Plans also were under consideration in Rhode Island, Massachusetts, Florida, Missouri, New York City and elsewhere.

Ten approved medical schools in Canada had a total enrollment of 4,016 last year, and graduated 858 doctors. In the preceding year, nine approved schools had an enrollment of 3,743 and graduated 791 doctors. The University of Ottawa Faculty of Medicine, a new school, was approved this year.

Canadian schools reported 214 women students (6% of total). Women graduates numbered 63 (7.3%).

EDITORIAL COMMENT

PROGRAM FOR 1952 ANNUAL SESSION

Members desiring to appear on the Scientific Session program for the 1952 annual session of the Society, to be held at Little Rock, April 21st, 22nd and 23rd, are invited to write Dr. J. W. Kennedy, Chairman, Arkadelphia. The Committee hopes to complete the full program at an early date.

RANDOM THOUGHTS OF THE SECRETARY

August 9th. Cruising at 8500 feet this afternoon with a temperature of 56 degrees we find the coming down to Adams Field with its 96 degrees more than uncomfortable but the stupendous success of more than 600 who are attending President Henry's Rural Health Conference justifies the trip. On no previous occasion have we observed so much interest, lay and professional, in a medical society-sponsored activity and we anticipate that much of good will return to the rural citizens of Arkansas. To bed with Hotel Pullman aboard the Rock Island at ten and sleeping away till past four, the train fortuitously late into Booneville and, with rare good fortune, finding a friend Fort Smith-bound on the station platform.

September 7th. From Denver in rented car to show the youngster once again Boulder and environs that he may reminisce over the days of his childhood spent in the shadows of the Flatirons, dining at the Blue Parrot, which fails to take his imagination as it did in those younger days, perhaps the first time he has experienced the sobering influence of years on the visions of childhood.

September 8th. Once again in wonderful Wyoming

with its bare plains, rolling hills, mesquite, sage and buffalo grass, sheep, cattle and hospitable, unfettered people, tallying for the memories of age the thrill that comes as we see the youngster bag his first antelope, a sight to be relived many and many a time as days go by, happy in knowing that we have had the heart-warming joy of seeing him take the first deer, pheasant, quail, duck and fish and offering just the silent wish that we may carry on until his gun has studs of many another trophy.

September 9th. Today Bill takes another antelope and the gods of the hunt are kind to us so that we, too, get ours, but there is much of regret that now the hunt is over and that the requirements of a college education do not permit companionship in the hunt until December when we may go for quail and duck. Moralizing to ourselves we are convinced that father and son know each other best when hunting or fishing. Would that more fathers and sons could have such happy experiences.

September 10th. Bill acts as guide this morning, a highlight in his hunting experiences, and we take the camera to record the doings of mallards in the nearby pond and of antelopes out on the plain until time to resume the habiliments of a more dressed-up life, boarding the train for home, to spend the afternoon, evening and the next day in complete rest, comparing notes on the expedition and wondering just where we may next try our luck.

September 16th. The "touring team" makes its first appearance at Rogers seriously attempting to explain the organization, aims and purposes of the medical society to interested members of the ninth councilor district who participate with questions sufficient to encourage the group to continue its efforts. Robins and Henry return by air as the rest of the group dines well indeed with Mary at Tontitown and disperses after a long, but we believe, worth-while day.

October 3rd. From Hollister lookout station viewing the majestic hills and valleys of the Ozarks, a vantage point for scenic splendor unsurpassed of all those we have been privileged to appreciate, topping in grandeur famed Inspiration Point.

October 4th. Putting in on the White River near Forsyth this morning with radiologists Ross Golden of New York, Lockwood of Kansas City, Walter Wasson of Denver, General Practice's affable secretary Cahal, Dupont's Perrine and printer Churchill and fast becoming initiated into the mysteries of float fishing, surprising ourselves more than anyone else by catching the first fish we have ever caught by casting and immediately converted to the ecstasies and excitement of angling.

October 5th. After a restful long night of sleep on a gravel bar which brought us almost as alone with Nature as did our nights on the Middle Fork of the Salmon out Idaho way, down stream eager to try our budding skill with rod, reel and plug for the finny beauties which abound in this stream and boosting our percentage of catches during a happy day, only a small part of the time being spent in trying to hear what the Giants and Yankees are doing.

October 6th. Awakened by steady rain which persists with variations only in degrees of downpour all the day, doubtless an accompaniment of any three-day fishing trip, down the river to the Bull Shoals lake area, an engineering feat which leaves us quite unimpressed as we have well determined by now that river fishing is far preferable to lake fishing, especially so since this day we catch no fish consoling ourselves only in the

thought that at least once in each five times have we been able to cast our pulg with a facsimile of accuracy to the site indicated by Lockwood. By the long country road from the Lead Hill ferry to Branson and into our car for a drive homeward busy with many thoughts over the wonders of fishing and the utmost of happiness which abounds in good fellowship.

October 14th. The touring team is luncheoned by Lutterloh and a few of the district turn out for the discussions on Society affairs but these few manifest much interest by questions and whether or not to continue in the effort to bring the state society to the membership causes the group well to ponder.

October 21st. Thanks to Braniff Airways, we spent six hours away from home today, three being given to activities of the Council which diligently works on its assigned job.

ANNOUNCEMENT OF POST-GRADUATE COURSES

The Office of Postgraduate Medicine of the University of Arkansas School of Medicine is pleased to announce the 1951-53 Program of Postgraduate Courses to be given at the School of Medicine in Little Rock.

This program has been prepared in cooperation with the Postgraduate Committees of the State Medical Society and the Academy of General Practice in conformity with the information obtained from the recent questionnaire.

The courses and dates are as follows:

Department	Dates
Surgery	October 29, 30, 31
Obstetrics and Gynecology	November 19-20
Otolaryngology and Ophthalmology	December 12, 13, 14
Medicine	January 10-11
Obstetrics and Gynecology	January 21, 22, 23
Pediatrics	February 18-19
Radiology	March 6-7
Surgery	March 24, 25, 26
Anesthesiology	April 3
Medicine	May 8-9
Obstetrics and Gynecology	May 19, 20, 21

The teaching program is planned to provide a maximum of bedside and clinical teaching. Consequently, only a limited number of physicians can be accommodated.

Advance registration is required and applicants will be handled in order of their receipt.

In conformity with the State Society Resolution, the cost of medical instruction is to be defrayed by a tuition charge of \$10.00 per day for the courses.

Arkansas physicians are fortunate in being able to attend Postgraduate Courses within their own state. Last year over 300 physicians participated and it is anticipated that as many or more will wish to attend these courses this year.



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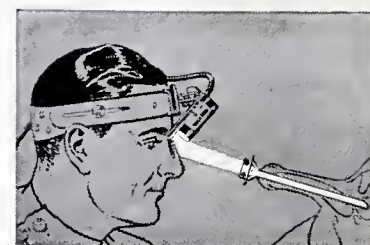


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Complete Specialists' Center-of-Beam Headlight Set: Includes the N160 (described above) and N180 fixed voltage transformer.

N1680 \$26.00

Fixed Voltage Transformer (for 6-v. bulb) with 7½-ft. extension cord, for 110-v., 50-60 cycle A.C. (Extra costs for 150-v. or 220-v. A.C., 50-60 cycle.)

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TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE PRESENT-DAY USAGE OF PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS

JOHN H. SKAVLEM, M. D.

California Medicine, December, 1950

The patient with tuberculosis must cure himself and the final conquest of the tubercle bacilli is a victory of the body itself. Physicians guide and assist the forces of the body to resist the multiplication and spread of the invading germs. Rest and good nutrition remain basic in the treatment. The ideal cure of any disease is to eradicate it with the least resulting loss of function of the involved tissue or organ. Surgical measures involving resection of parts and permanent loss of function represent defeat of medicine. This is not the fault of the surgeon but of the limitations of medical knowledge which allow the disease to reach a stage which demands the serious loss of function to win life.

Research for the cure of tuberculosis is and must remain the realm of prevention, of early diagnosis, and of specific bactericidal agents to check the progress of the disease. Yet, until those goals are achieved, surgical measures cannot be abandoned and efforts to improve them must continue.

Pneumothorax, as an active definitive treatment for pulmonary tuberculosis, has been widely used. The patient well chosen for this treatment is one whose tuberculous lesion will heal more quickly and surely when the lung is relaxed by the introduction of air in the pleural space. The selection may depend upon the patient himself—his race, color, temperament, and his ability or willingness to take rest. The lesion should be in considerable part an exudative one capable of being absorbed or of healing with minimal scar. Any cavity present (and usually cavitation is demonstrable by X-ray studies) should be one which will permit of closure by relaxation of the surrounding lung tissue. Tubercle bacilli in the sputum is evidence of necrosis and ulceration, even though no cavity is observed on X-ray films. In the area to be collapsed, there must be no evidence of bronchial obstruction which cannot be relieved. The significance of bronchial lesions in the area as well as the method of dealing

with the thin-walled cavity which indicates bronchial obstruction has changed since the advent of streptomycin and other new drugs. Bed rest for three months to study the ability of the body to cope with the lesion should be tried before pneumothorax is undertaken, unless circumstances develop which indicate unequivocally that bed rest alone is inadequate. For each patient it must be decided whether or not streptomycin or other drugs shall be added to bed rest in this period. At the end of three months of observation and treatment, all findings must be reviewed to determine whether or not the healing process is adequate. By withholding pneumothorax in cases in which there are toxic manifestations the incidence of empyema in connection with the procedure has been greatly reduced. Streptomycin and other new drugs have reduced the time necessary to overcome toxic manifestations. Results of pneumothorax for Negroes are not as good as for white patients. The hazards are greater as they are for patients with diabetes. The judicious use of insulin and streptomycin in the latter group makes the procedure safer and more effective.

The effectiveness of pneumothorax in a case can sometimes be quickly determined by X-ray studies. If the lung is completely surrounded by air, with no pleural adhesions and with evidence of cavity closure, good results seem probable. If there are broad adhesions preventing relaxation of tissue or cavity closure, the procedure is not likely to be effective. Between these limits are all gradations of conditions. Each patient must be studied individually, perhaps with thoroscopic observations. The procedure can always be modified or stopped.

Fluid in the pleural space during pneumothorax treatments creates a difficult problem. It is agreed that fluid persisting for weeks, increasing in amount or becoming turbid or bloody, or giving rise to toxic signs, or showing evidence of pyogenic nature, calls for termination of pneumothorax. The transitory presence of fluid after

certain procedures, such as pneumonolysis, must be taken into consideration.

At times, circumstances compel continuance of pneumothorax in cases in which it is not fully satisfactory—cases in which bed rest has proved to be inadequate. The cavity may remain open and the sputum positive for tubercle bacilli. A cavity in the lung is not feared simply as an anatomic hole, but because it offers an environment—extra moisture, extra oxygen, less blood supply, less movement—in which the tubercle bacilli can live and multiply. From this focus, there are open bronchial avenues of spread within the lungs and elsewhere to trachea, larynx, mouth cavity, stomach, and intestines. A sterilized cavity can harm only by reducing function by loss of tissue. No effort should be spared in search for methods and means to sterilize permanent cavities.

The time for voluntary termination of pneumothorax is often discussed and variously answered. Often the answer is dictated by events. The lung gradually expands, the normal part first, then the involved part, until the pneumothorax space becomes so small that the treatment must be stopped. It is to be hoped that this process will be orderly and delayed until the lesion has become inactive, the cavity closed, and the sputum negative for tubercle bacilli. This may take from one to three years in the best of circumstances. If pneumothorax is continued too long, the lung may become incompletely expandable. This can best be avoided by watching the ability of the lung to expand and contract and the thickness of the visceral pleura. The patient's willingness, ability, and opportunity to carry on with extra rest and physical limitations must be weighed in the final decision.

Among physicians treating tuberculosis there is uniform agreement that pregnancy in a patient with active pulmonary tuberculosis in whom the disease is well controlled, offers no serious hazard to life or to the expectancy for recovery. If the disease is not controlled, then pregnancy is a definite hazard to recovery and to life. Some form of collapse therapy may then be necessary. Pneumothorax, if it can be effectively induced, then is the method of choice.

The treatment of pulmonary tuberculosis is not a skirmish, not a battle, not a siege, but a long-drawn-out war with activity on many fronts. Treatment must be based on strategic plans to suit the patient for years, perhaps for a lifetime. The plan must be to eradicate the infection while preserving at a maximum the function of the diseased part. Extension of the disease and

complications in parts of the body must be dealt with quickly. Pneumothorax is the most flexible and versatile method of collapse therapy because it can be lessened, enlarged, shifted from side to side, applied to both sides, combined with any other form of treatment—rest, drug, antimicrobial, or surgical—or stopped at will. A treatment with such long and widespread effective usage, the value and limitations of which have been determined, is one to be retained and used in combination with all other forms of treatment. As methods improve to prevent tuberculosis and to diagnose and treat it early when it does occur, progress toward the goal of minimum sacrifice of tissue or function will eventually reduce the need for the clumsy methods of collapse and resection. The last of these methods to be abandoned will be the flexible, versatile pneumothorax, narrowed in its application but effective to the last well-chosen case.

OBITUARY

ALGENON W. KEITH, age 72, died suddenly at Stamps September 28th. He had practiced in Stamps since 1923 and was previously located in Columbia county. He was an honorary member of the Lafayette County Medical Society and of the Arkansas Medical Society. Surviving relatives are his wife, two sons and a daughter.

ROSCOE CONKLIN KORY, age 66, Little Rock, died September 28th of a heart attack. A graduate of Tulane University in 1910, he had resided in Little Rock for 41 years, practicing eye, ear, nose and throat. He was a member of the Congregation B'Nai Israel, the Masonic bodies, the Consistory, Scimitar Temple, A. A. O. N. M. S., a fellow of the American Medical Association and emeritus professor of surgery (ophthalmology) of the University of Arkansas School of Medicine. Surviving relatives are his wife, two sons, and a brother.

CLARENCE B. BILLINGSLEY, age 69, died at his home in Fort Smith September 12th. He was a graduate of the Memphis Hospital Medical College in 1910 and had practiced in Oklahoma prior to locating in Fort Smith about 25 years ago. He had been an active worker in the Church of Christ serving as elder and was the founder of the Southern Christian Home, now located at Morrilton. Prior to his retirement from active practice in 1944, he was associated with the Holt-Krock Clinic specializing in obstetrics and gynecology.

ANNUAL REPORT OF THE PULASKI COUNTY MEDICAL ASSISTANTS ASSOCIATION

The year, 1950-51, the second year of the existence of the Pulaski County Medical Assistants Association, has been very successful in achieving the aims of the group. Our outstanding project was the Refresher Course in cooperation with the Adult Vocational Division of the Little Rock Public Schools, Fred Graham, Supervisor, and the Arkansas State Department of Education. The four courses with their instructors were: Human Relations, Kenneth G. Lewis, Melvin Adams, State Department of Education; Medical Terminology, Mrs. Elizabeth Marsh, Librarian, University of Arkansas School of Medicine; Nursing Techniques, Miss Barbara Belzner, R. N., Little Rock Vocational School; Office Procedures and Management, Miss Marguerite LaGrande, Superintendent, Trinity Hospital; K. W. Newman, Administrator, University Hospital; Gaston Fulmer, Executive Secretary, Pulaski County Medical Society and E. Eugene Mapes, C. P. A. James E. Jones was the director of the school. This project amply covered the first object of our organization:

"To provide a means whereby each and every medical assistant may become closely associated and thereby work together toward the common good of the medical profession."

Those who received certificates and their employers are:

Mrs. James Durham, Miss Amelia Patton, Mrs. Nadyne Perry, Miss Mardell Phillips, Miss Joann Newell and John Kerby, University Hospital; Misses Joy Fish, Carolyn Hunter, Catherine Joyner, Bernice Lyons and Jean Reinhardt, Drs. Rhinehart and Rhinehart; Mrs. Marguerite Broderick, Mrs. Ruth Burns, Mrs. Beatrice McAlister, Drs. Henry and Ross; Misses Elizabeth Booe and Frances Melville and Mrs. Mary Alice Hood, Little Rock City Health Department; Mrs. Laura Citty, Miss E. Tucker, Dr. Vida Gordon; Mrs. Elza Lee Dunn, Dr. Marion S. Craig, Jr.; Miss Constance Crandall, Dr. Gilbert Dean; Mrs. Rose Mary Gardner, Dr. Joe Hardin; Mrs. Mae Jenkins, Dr. N. T. Hollis; Mrs. Walter Johnson, Dr. Bert L. Phillips; Mrs. Evie Brown, Dr. Hal Dildy; Mrs. Mary Ellen Page, Dr. Charles R. Chesnutt, Jr.; Mrs. Mabel Slaten, Dr. Ben D. Means; Mrs. Marie Kurzer, Dr. Vernon Newman; Mrs. Elizabeth Thweatt, Drs. Gray and Calhoun; Mrs. Marie

Barentine, Mrs. Viva Bridges and Mrs. Nina Cornyn, not employed.

As the Medical Assistants Association has grown, suggestions were made to us about our becoming a clearing organization between physicians and medical personnel seeking employment. This service apparently had been a growing need for quite some time. The demand grew until we could no longer ignore it, or delay the project until the coming year. There were twenty-five applications within three months for part-time and permanent work. Three permanent placements were made, with a possible fourth and fifth. One person was placed for vacation work. Two of the calls came from the dental field. This work has covered the second object:

"To aid Medical Assistants with their medical problems."

We have not overlooked social service, for we have provided birthday gifts for the patients at the Pulaski County Hospital throughout the year, with a special treat at Christmas time.

Social contact among the medical assistants has had its place in the year's program. The installation dinner, invitational tea, chili supper and annual picnic each provided entertainment, pleasure and relaxation, as well as an opportunity to know each other outside of the daily working contacts.

AN EARLY SIGN OF PNEUMONIA

J. H. SCROGGIN, M. D.

Benton

After a search of the literature on "The Signs and Symptoms of Pneumonia," I have decided to give to the medical profession a sign that can be found from 12 to 18 hours before any other method mentioned.

That is over the area of involvement by gentle feeling over the chest, you can ascertain an area that has the feeling of chill bumps but from the point of vision both areas look the same. I have repeatedly checked this sign both by waiting for developing of dullness and rales and by an early chest film. I have found it to be accurate. By being able to find an early sign and by our up-to-date methods of treatment, a case of pneumonia may be aborted or at least developed into a mild case.

When you find an area of sensation on the chest that has the feel of chill bumps, as the infection spreads the area of roughness spreads. Also, as the condition in the lungs improve, the area of roughness disappears.

PERSONALS AND NEWS ITEMS

M. E. Foster, Fort Smith, spent a recent vacation in Wyoming.

Carl A. Rosenbaum, Little Rock, has been appointed a trustee of the University of Arkansas.

R. R. Kirkpatrick has been elected surgeon of the Texarkana post, American Legion.

Dr. and Mrs. I. F. Jones, Fort Smith, spent a recent vacation in Chicago and Detroit.

Robert Watson, Little Rock, attended sessions of the American Neuro-Surgical Society at Sun Valley, Idaho, during September.

Fred H. Krock, Fort Smith, has been elected Arkansas councilor of the Southwestern Surgical Congress.

G. K. Patton, Van Buren, recently addressed the Lions Club on the Crawford County Medical Hospital.

W. E. Morris, Little Rock, addressed the American Association of University Women on "Local Health Needs" recently.

A. L. Best, Newport, has received the Golden "T" of the University of Tennessee School of Medicine.

I. F. Jones, Fort Smith, addressed the Planned Parenthood Association of Washington County at Fayetteville recently.

H. V. Kirby has been elected a member of the Harrison School Board.

H. W. Savery, Van Buren, hunted deer in Colorado during October.

D. A. Rhinehart, Little Rock, attended the American Roentgen Ray Society meeting in Washington during October.

Friedman Sisco, Springdale, took special work at Cook County Hospital, Chicago, during October.

Dr. and Mrs. W. Goldstein, Fort Smith, spent an October vacation at Edgewater Gulf, Mississippi.

Alan G. Cazort, Little Rock, addressed the Tri-State Medical Assembly, Marshall, Texas, September 26th and 27th, on "Therapy of Dyspnea in Asthma" and "Drug Sensitivity."

Dr. and Mrs. L. K. Hundley, Pine Bluff, spent a recent vacation in Tuscaloosa, Alabama.

BORN—On September 27th, a daughter, Jean Anne, to Mr. and Mrs. Sid Wrightsman, Jr., Atlanta.

James Dunbar, formerly located at Salem, has established an office at Mountain Home.

Fred Harris, Little Rock, addressed the recent meeting of the Arkansas State Nurses Association on "Conditions in England."

The Woman's Auxiliary to the Connecticut State Medical Society was addressed at Hartford, November 1st by R. B. Robins, Camden, on "Medicine in This Changing World."

Dr. and Mrs. Porter Rodgers, Searcy, spent a recent vacation in Virginia.

D. W. Goldstein and M. B. Hoge, Fort Smith, conducted a diagnostic cancer clinic at Waldron August 17th.

W. A. Reilly, formerly of the faculty of the University of Arkansas School of Medicine, has accepted appointment to direct the radio-isotope unit of the Veterans Hospital, Fort Miley, California.

W. E. Knight and Fred H. Krock have been elected first vice-president and director, respectively, of the Knife and Fork club at Fort Smith.

D. W. Goldstein, M. B. Hoge and W. R. Brooksher, Fort Smith, conducted a recent diagnostic cancer clinic at Mena under the joint sponsorship of the Polk County Medical Society and the Arkansas Cancer Society.

Paul L. Mahoney, Little Rock, took special work under Samuel Fomon at New York during October.

The October issue of the Southern Medical Journal contains "The Use of the Cystogram and Urethrogram in the Diagnosis and Manage-

ment of Rupture of the Urethra and Bladder" by J. P. Robertson, Birmingham, and James W. Headstream, Little Rock, and "Chronic Rheumatoid Arthritis," by Euclid M. Smith, Hot Springs National Park.

Among those in attendance at the October meeting of the Kansas City Southwest Clinical Society were W. F. Adams, E. Z. Hornberger, F. H. Krock and L. O. Lambiotte, Fort Smith, and L. K. Williams, Mena.

Among those present at the Saint Louis Session of the Southwest Surgical Congress were: T. P. Foltz, S. W. Hawkins, M. B. Hoge, Fred H. Krock, Fort Smith; M. C. Hawkins, Searcy; Gilbert O. Dean, D. H. Shipp and Robert Watson, Little Rock; J. B. Wharton, Jr., El Dorado, and L. P. Good, Texarkana.

L. P. Good, Texarkana, has been elected president-elect of the Southwestern Surgical Congress.

A. F. Stanley, Harrison, has received a certificate of merit from the University of Tennessee College of Medicine.

Speakers before the Dallas session of the Southern Medical Association are: Randolph T. Smith, Little Rock, "Surgical Training for the General Practitioner"; Jerome S. Levy, Little Rock, "The Use of Protein Hydrolysates in the Therapy of Peptic Ulcer" (chairman's address); W. A. Reilly, Little Rock, "Treatment of Obesity in Children" (chairman's address); Ellis P. Cope, Little Rock, "Nummular Dermatitis"; Alan G. Cazort, Little Rock, "The Snows of Yesteryear" (chairman's address); John M. Hundley, Little Rock (with M. J. Stewart, Memphis), "End Result Study of 546 Cases of Fracture of the Humerus"; K. W. Cosgrove, Little Rock, "The Control of Trachoma," and Lloyd D. Seager, Little Rock, "Curare and Curare Antidotes." Officers of the Association are L. H. McDaniel, Tyronza, Councilor; Fount Richardson, Fayetteville, Secretary, Section on General Practice; Jerome S. Levy, Little Rock, Chairman, Section on Gastroenterology; W. A. Reilly, Little Rock, Chairman, Section on Pediatrics and Alan G. Cazort, Little Rock, Chairman, Section on Allergy. Participants in opening discussions are: Euclid M. Smith, Hot Springs National Park; Ben B. Wells, Little Rock; F. Walter Carruthers, Little Rock, and Willis E. Brown, Little Rock. Lloyd D. Seager

and Edwin L. Rushia, Little Rock, will present a scientific exhibit on "The Anticurara Action of Some Neostigmine Derivates."

The following were registered at the Regional Meeting of the American College of Physicians at Hot Springs National Park October 6th; R. S. Faircloth, Walnut Ridge; Charles H. Lutterloh, Hot Springs National Park; B. B. Wells, Little Rock; Daniel H. Autry, Little Rock; Jerome S. Levy, Little Rock; W. T. Champion, Stuttgart; W. L. Davis, Searcy; G. G. Hairston, Prescott; E. J. Cruse, Black Rock; J. N. Compton, Little Rock; C. A. Thompson, El Dorado; A. C. Parker, Clarkedale; R. E. McLochlin, Little Rock; O. C. Melson, Little Rock; A. A. Pringos, Little Rock; F. J. Scully, Hot Springs National Park; Euclid M. Smith, Hot Springs National Park; H. T. Smith, McGehee; W. M. Hamilton, Little Rock; C. T. Chamberlain, Fort Smith; C. E. Kennedy, Smackover; A. A. Blair, Fort Smith; L. T. Hooker, Benton; Frank M. Adams, Hot Springs National Park; S. M. Wilson, Rogers; P. J. Almaden, Little Rock; Alfred Kahn, Jr., Little Rock; H. E. Leming, Fayetteville; J. W. Leatherman, Hot Springs National Park; Driver Rowland, Hot Springs National Park; E. Z. Hornberger, Fort Smith; Geo. B. Fletcher, Hot Springs National Park; Ken Thompson, Fort Smith; John D. Ashley, Jr., Newport; D. C. Lee, Hot Springs National Park; A. M. Davison, Hot Springs National Park, and J. E. Greutter, Little Rock.

The following were in attendance at the Chicago sessions of the American Academy of Ophthalmology and Otolaryngology during October: Dale Alford, R. A. Calcote, R. J. Calcote, Raymond Cook, W. J. Schwarz, J. F. Henry, K. W. Cosgrove and John Watkins, Little Rock; Max Baldrige, Texarkana; Virgil Payne, Pine Bluff; Louise Henry, Chas. Lane, E. C. Moulton and E. C. Moulton, Jr., Fort Smith.

Carroll F. Shukers, Little Rock, has been appointed chief of laboratory service at the Veterans Administration Hospital, Little Rock.

"A Symposium on Electrolytes" with Ben B. Wells, Little Rock, as moderator, and with the following speakers was presented to the October meeting of the American Society of Clinical Pathologists in Chicago: "Laboratory Methods for Estimation of Sodium and Potassium," Carroll F. Shukers, Little Rock; "Electrolyte Disturbances in Congestive Heart Failure," Owen

W. Beard, Little Rock, and "Temperance in Potassium Therapy," P. J. Almaden, Little Rock. Others in attendance were: A. S. Koening, Fort Smith; M. J. Kilbury, Little Rock, and E. S. Chappell, Texarkana.

H. B. Thompson, Fort Smith, spent a recent vacation in Minnesota.

George C. Burton, El Dorado, spent a recent vacation in Florida.

Dr. and Mrs. Roy Millard, Russellville, spent a recent vacation in the Mena area.

J. H. Moseley has moved from Hampton to Warren.

The University of Arkansas School of Medicine has received a grant of \$15,000 from the National Fund for Medical Education which is to be used for instruction purposes.

BOOK REVIEW

Let's Have Healthy Children. By Adelle Davis. Pp. 314. Price \$3.00. New York: Harcourt, Brace and Company, 1951.

This is an interesting book, ranging from recommendations of blackstrap molasses, wheat germ and the like, to a proposed infant feeding program which may not meet with the full approval of physicians plus the surprising belief that fried chicken, hamburgers and other foods, properly and wisely prepared, are not harmful to children. These comments are tempered with disapproval of manufactured candy, soft drinks and white buns. Sound advice is the admonition that food be served for enjoyment and that emphasis on nutrition to the child may be harmful.

Dr. Colwell's Daily Log for Physicians. Price \$6.00. Campaign, Illinois: Colwell Publishing Company, 1951.

This compact, simplified accounting system for physicians gains in popularity each year and deservedly so since it offers a complete financial record with a minimum of effort.

PROCEEDINGS OF SOCIETIES

The Tenth Councilor District Medical Society elected the following officers at its recent meeting in Fort Smith: President, W. R. Scarbrough, Clarksville; Vice-president, C. W. Hall, Greenwood, and Secretary-treasurer, C. C. Long, Ozark.

The Pulaski County Medical Society was addressed October 1st by Edwin F. Gray, "Radiographic Study of the Small Intestine."

The Craighead-Poinsett County Medical Society was addressed October 3rd by representatives of Blue Cross-Blue Shield: Alfred Kahn, Little Rock, "Epigastric Pain" and Henry G. Hollenberg, Little Rock, "Surgical Conditions of

the Breast with Reference to Benign Conditions."

J. H. McCurry, Secretary.

The First Councilor District Medical Society will meet at the Jonesboro Country Club, November 15th, at 2:00 P. M.

The Sebastian County Medical Society was addressed October 9th by Mr. Grover Jernigan, Fort Smith, on "The Doctor and His Investments."

Art B. Martin, Secretary.

The Fifth Councilor District Medical Society met in Camden with Rember, of the headquarters staff of the American Medical Association, as guest speaker.

The Washington County Medical Society was addressed at Fayetteville October 2nd by W. R. Brooksher, Fort Smith, on "Peptic Ulcer."

The Ouachita County Medical Society met in regular monthly dinner session September 6, at the Ouachita Hotel in Camden.

The program consisted of a movie on poliomyelitis and the following talks:

"Otosclerosis," Frank S. Forman, Little Rock, and "Management of Chest Injuries," James H. Growden, Little Rock.

Announcement was made that the Fifth District Medical Society will meet in Camden Thursday night, October 4. Speakers are Mr. Leo Brown, Director of Public Relations, American Medical Association, Chicago and Dr. Charles R. Henry, President of the Arkansas Medical Society.

R. B. Robins, Secretary.

The Craighead-Poinsett County Medical Society was addressed September 5th by William J. Brown, Little Rock, on "Syphilis."

J. H. McCurry, Secretary.

The Pope-Yell County Medical Society was addressed September 20th by Edwin Gray, "Diseases of the Chest" and by Ray Fulmer, "Common Dermatological Problems," both speakers of Little Rock.

W. O. Young, Secretary.

The Benton County Medical Society met in dinner session at Siloam Springs October 11th with Dr. Clayton Curtis as guest speaker.

Lee A. Dean, Secretary.

The Pope-Yell County Medical Society was addressed October 11th by William Henry on psychoses and neuroses.

W. O. Young, Secretary.

The Association of Tumor Clinic Staff Members in Arkansas met at Texarkana October 25th for the following program: "Cancer of the Oral Cavity," Oliver S. Moore, New York, and "The Use of Radioactive Isotopes in Medicine," J. Edward Rall, New York.

WOMAN'S AUXILIARY NEWS

Mrs. J. G. Martindale, President, Woman's Auxiliary to the Arkansas Medical Society, addressed the Tri-State Medical Assembly at Marshall, Texas, September 26th.

The Arkansas County Medical Auxiliary to the Arkansas County Medical Society met in Stuttgart, at the Riceland Hotel on Tuesday, October 16th, 1951, where the members had dinner with the doctors. After dinner the ladies held their regular meeting.

Present were mesdames Drennen, Wilson, Whitehead, Sr., Talbot, Rasco, Jr., Van Duyn and John.

Mrs. Rasco, Jr., was appointed Hygeia Chairman. She will place copies of the publication in the white and colored high schools of DeWitt and Stuttgart during the school year.

Mrs. John brought a few highlights of the American Medical Association Convention which she attended with Dr. John in Atlantic City in June. Mrs. John attended a number of auxiliary meetings and luncheons.

Plans were made for celebrating the twenty-fifth anniversary of the organizing of the Arkansas County Auxiliary. The first meeting was called by the late Mrs. M. C. John on November 9th, 1926, in Stuttgart.

Tentative plans were made for honoring our doctors on Doctor's Day in March. Mrs. Whitehead, Sr., was appointed Doctor's Day Chairman.

Mrs. John reported on the showing of a film entitled "Here's Health the American Way" which she presented to the Amici Club of Stuttgart on October 10th.

Mrs. Milton John,
Secretary-Treasurer.

The Women's Auxiliary to the Garland County

Medical Society met September 17, 1951, at the home of Mrs. Euclid Smith with Mrs. Turner Wooten, Mrs. Tom Durham, and Mrs. Charles Lutterloh as co-hostesses.

The business meeting was called to order by the President, Mrs. Robert Atkinson. She welcomed Mrs. Henry Eisenburg as a new member and welcomed home Eleanor Leatherman and Margarette Fotio.

The minutes of the May meeting were read and approved. Mrs. Atkinson asked that the membership list be brought up to date. It was suggested that the army doctors' wives be invited and urged to attend the meetings. A balance of \$35.21 was reported in the treasury.

Mrs. Atkinson thanked Mrs. Leeman King, Mrs. James Chesnutt, and Mrs. Charles Lutterloh for preparing the programs for our coming year.

Mrs. O. A. Smith distributed the yearbooks and asked all members to subscribe to "The Bulletin" and "Today's Health." Mrs. Davison was asked to find out if these publications are being used in our Junior and Senior high schools before we vote to furnish them.

Mrs. Durham reported on the Rural Health Meeting which was held in Little Rock.

The Ways and Means committee suggested several different methods of raising money. It was voted to sell chances on \$35 worth of merchandise from the Hollywood Shop. Each member is to be responsible for six tickets at 50 cents each.

A panel discussion of the year's activities was held. They included the radio program to be sponsored by Mrs. Jack Wright, Legislation by Mrs. King Wade, Sr., Doctors Day by Mrs. King Wade, Jr., Nurse Recruitment by Mrs. E. K. Clardy, and Loan Funds by Mrs. Charles Lutterloh.

Mrs. George Fletcher was requested to read her poem "When Gramps Was a Medico."

Mrs. Atkinson reminded the members of Miss Kaplan's request for aid for the Old Folks Home.

It was voted to change the time of our meetings from 2:30 p. m. to 2:00 p. m.

Mrs. Davison reported on the Sewage Steering Committee and explained the necessity of a revised sewage system.

In the absence of the Treasurer, Mrs. Davison collected our 1951-1952 dues.

The meeting adjourned and a lovely refreshment course was served by the hostesses.

Mrs. C. W. Parkerson, Secretary,
Garland County Medical Auxiliary.

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ROY CARL YOUNG, M.D., Psychiatry and Neurology

A. LAURIE YOUNG, Manager

NORM

Normal schedule of development (auxodrome) plotted on Wetzel Grid.¹

CURVE A

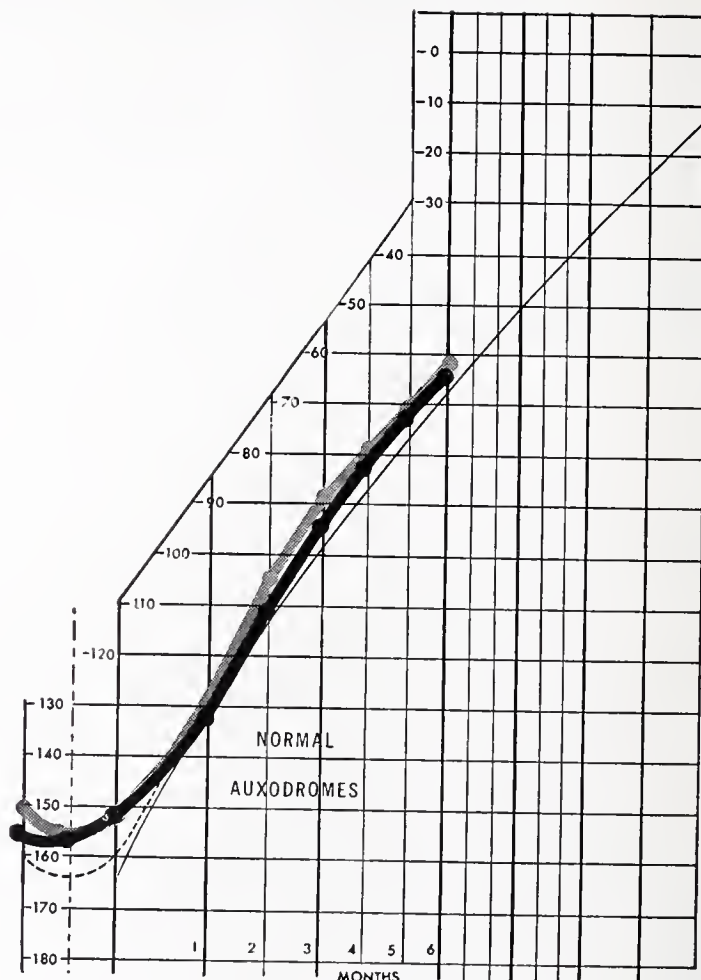
Composite Wetzel Grid auxodrome of 60 unselected infants on S-M-A from birth to 6 months of age.

CURVE B

Growth data, recomputed on Wetzel Grid, based on "selected subjects, most of whom were favored by environment;"² age: from birth to 6 months.

1. Wetzel, N. C.:
J. Pediat. 29:439,
1946.

2. Jackson, R. L.,
and Kelly, H. G.:
J. Pediat. 27:215,
1945.



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ANO-RECTAL PROBLEMS IN THE HOME AND OFFICE*

JOHN LAURENS, M. D.
Little Rock

One of the chief characteristics of the more common ano-rectal diseases is their tendency to originate in mild forms, pass gradually or abruptly into more severe phases, and finally become chronic and resistant to any but radical treatment. It is therefore logical that in the management of ano-rectal problems, much can be gained by giving prompt attention to the first manifestations of disease in this area. Although we do not as a rule recommend the performance of rectal surgery on the ambulatory patient, there are certain pathologic processes which, either because of their acuteness or superficial nature, lend themselves readily to treatment without going to the hospital.

The most common condition we see which benefits from immediate surgery is the acute external thrombotic hemorrhoid. Generally, if one sees the patient within the first 24 to 72 hours after the onset, it is wise to extract the clot. After this period of time, conservative therapy will usually suffice, though there are some who will continue to suffer from a considerable amount of pain for five to seven days, and who will obtain relief from thrombectomy. Local infiltration with 2% procaine is employed for anesthesia, and the clot is removed by ample excision of an elliptical segment of skin along with the underlying thrombus. A simple incision is not adequate, for the edges of the wound will heal rapidly and the symptoms quickly reappear. Bleeding is usually minimal, though occasionally it is necessary to ligate or coagulate a persistent vessel. A small strip of oxycel gauze, moistened in a solution of Americaine, a topical analgesic containing 20% benzocaine, is then placed over the open wound with one end loosely inserted into the anal canal, and a small pressure dressing applied. The oxycel-Americaine combination serves both as a hemostatic and analgesic measure. The patient is in-

structed to take a hot Sitz bath in 4 to 6 hours, and the gauze wick is allowed to pass spontaneously with the first bowel movement.

With regards to the conservative treatment of thrombosed external hemorrhoids, local heat, an analgesic ointment, rest in bed, a bulk laxative, and salicylates, with codeine if necessary, will produce satisfactory results. However, in the occasional case of massive, protruding, edematous, thrombosed internal and external hemorrhoids, the problem is quite a different one. As a rule, there is too much edema to attempt to reduce the hemorrhoidal mass manually, though this can be accomplished in a certain number of cases. Unfortunately, the prolapse often recurs and we have found that the best results are obtained with the following management: The patient is kept in bed with hips elevated on a pillow for a period of no longer than 24 to 36 hours, during which time an ice bag is constantly applied as cold seems to work better than does heat, due probably to the marked congestion and impending gangrene. In addition, in those cases in which edema and necrosis are marked, a solution of lead subacetate and tincture of opium in saline is applied with compresses. Of course, analgesics are used liberally, for the pain is severe.

After this limited period of conservative treatment, the patient is hospitalized and definitive surgery performed, as prolongation of this therapy is only attended by considerable suffering and slow resolution of the existing pathology. We have learned that, contrary to previous teachings, operating during this acute stage is not dangerous, but, on the other hand, is quite safe and relatively simple, since the plane of dissection is delineated very nicely as a result of the thrombosis, the mucosa and submucosa stripping readily from the underlying musculature. This type of massive hemorrhoidal prolapse with strangulation is occasionally seen following delivery, and we have recently observed very gratifying results following its surgical correction in the early post-partal period.

In a proctologic practice, anal fissures are found in about 60-70% of the patients operated upon for rectal disorders. I would like to differentiate between anal fissure and anal ulcer. The

*Read before Arkansas Academy of General Practice, Little Rock, October 18, 1951.

former is merely a superficial abrasion of the anal mucosa that may or may not be associated with a cryptitis and inflammatory changes in the underlying muscle. In an anal ulcer, the condition is chronic and the surrounding tissue and underlying musculature is always involved in a chronic inflammatory reaction, which in the advanced stage may progress to fibrosis with its attending anal stenosis. In the acute, painful, superficial fissure with associated reflex sphincter spasm, and without an inflammatory change in the muscle, considerable relief can be afforded by injecting the base with an oil-soluble anesthetic, after first using a small amount of 2% procaine. This will produce satisfactory relaxation of the sphincter and abolish the reflex spasm long enough to allow the fissure to heal. This method of treatment is also efficacious in those more chronic fissures which are associated with early infiltration of the muscle by inflammatory cells, in order to provide temporary relief from pain until the patient can be hospitalized for definitive surgery. An alternate method in some of the more superficial fissures is to incise the fissure along with the superficial fibers of the external sphincter. This may be done as an office procedure, using local anesthesia, and occasionally will provide permanent relief. However, I would like to emphasize that if there is an associated cryptitis, or if a chronic inflammatory reaction has occurred, one is merely wasting time, as the lesion is or soon will be an anal ulcer, and will require adequate excision in the hospital. In treating these lesions in the office, I would like to urge against the use of caustics such as silver nitrate, as one is only adding insult to injury, and producing more damage in already diseased tissue. In the occasional case which is incised, as mentioned above, a dressing employing oxycel and Americaine solution is very satisfactory. These patients must be followed closely in order to be sure that the wound heals from the bottom up.

As we all know, cryptitis, or infection of the anal crypts, is the first stage in the pathology of practically all benign ano-rectal diseases. Anal fissures, ulcers, fistulae, abscesses, hemorrhoids, and pruritis ani may each and everyone begin as a cryptitis. The importance of the anal glands and ducts has been brought out in the literature. I am emphasizing this point because there is much that we can all do to lower the incidence of crypt infection and its attending sequelae.

It was once felt that constipation was one of the major predisposing causes of ano-rectal disease. It has now been fairly definitely proven that it is not only not an important cause, but is

more often the result, the true etiologic factor being cryptitis. Studies of large series of patients with rectal pathology have revealed that more than 50% of them were never constipated, but, on the other hand, a greater percentage had complained of loose or diarrheal stools prior to the onset of their difficulty. This is readily understandable when one recalls that the crypts are small pockets opening upward, and thus are a much easier portal of entry for soft or liquid stools than for constipated stools. It is, therefore, felt that infection in the anal crypts, ducts, or glands is the first stage in the pathogenesis of the great majority of the diseases in this area, including hemorrhoids, and that the constipation which is found in these patients is often secondary. It behooves us all, consequently, to treat the existing pathology when it is found, and if constipation is a factor, attend to this later if necessary. In this regard, I would like to urge that in handling the minor ano-rectal problems, we should not allow our patients to keep their stools loose and watery by the use of the ordinary laxatives, but, on the other hand, should employ one of the bulk laxatives in order to insure a well-formed stool, in addition, of course, to an adequate fluid intake which means at least 6 to 8 glasses of water daily, and an anti-constipation diet. This applies particularly to the after care of patients who have had minor proctologic procedures performed in the office, as well as to the care of the patient who has been hospitalized for more radical rectal surgery. We have found that the preparations containing methylcellulose in one form or another produce very satisfactory results.

With regards to the treatment of these cases of early or incipient ano-rectal infection, a certain percentage of them can be handled very nicely in the office or at home. If, on examination with an anoscope, the crypts appear inflamed but are not found to be deep pockets when a hook is inserted, the patient can probably be given a trial of conservative therapy consisting of hot Sitz tubs 2 or 3 times daily, the use of a mild ointment containing boric acid and zinc oxide, and a bulk laxation to insure the proper dilatation. If the crypts are found to be deep and there is no other associated pathology, they may be opened up in the office under local anesthesia, employing a crypt hook whose concave margin is sharpened. Likewise, if small symptomatic hypertrophied anal papillae are associated with the cryptitis, these should also be removed, as they represent a papillitis and will cause further trouble if left alone. However, once the stage of papillitis has occurred, it is much wiser to hospitalize the patient

in order that an adequate removal of all crypts and papillae may be accomplished.

As we all know, ano-rectal abscesses and fistulae are but advanced stages of a process that began as a cryptitis. When a diagnosis of an ischiorectal or post-anal abscess is made, this abscess should be drained promptly because of the rapid spread of infection through the poorly resistant fatty tissue of the perirectal spaces. Furthermore, these abscesses may perforate superiorly through the levator muscles into the pelvirectal and retrorectal spaces, and in certain cases may even penetrate the peritoneal cavity. In small abscesses, the area may be very satisfactorily drained under local anesthesia, either in the home or office, and a small wick inserted to prevent too rapid healing. In large abscesses, if possible, the patient should be hospitalized to provide complete drainage, though, if this is impossible, the most fluctuant area should at least be incised in order to establish some drainage and prevent extension of the process. We recently saw a patient whose abscess had been present for at least a week, being treated by penicillin and local heat. There were two huge, tense, fluctuant masses involving at least 50% of each buttock, with bulging into the rectum above the levator muscles. The patient was acutely ill with a temperature of 103 degrees F. At operation, the infection was found to involve both ischiorectal fossae, extending posteriorly around the rectum so that free communication existed between these fossae, and furthermore extending superiorly through both levators up to the peritoneal reflection; at least a quart of foul-smelling purulent material was liberated. It would have been far wiser to have drained this patient in the early stage of her disease, before marked destruction and necrosis of tissue had taken place.

One other point about abscesses, and that is that when one is drained, a fistula will generally develop if it has not already done so by spontaneous rupture, and the patient should always be instructed that this may occur. In a very occasional case of a superficial, uncomplicated fistulous tract, one may cure the patient by an office procedure, simply unroofing the fistula from its external to its internal opening under local anesthesia. However, this wound must be watched carefully so that the top does not heal before the base.

It was mentioned previously that pruritus ani often is secondary to other existing ano-rectal pathology. The subject of pruritus itself would require a complete morning for adequate discus-

sion and still we would not be too much more enlightened than we already are. This condition is the bane of the proctologist's existence, but there are a few points that I would like to emphasize, especially in the management of early cases and the prevention of the chronic form with its characteristic skin changes. A great many cases of perianal itching are due to excessive moisture of the skin resulting from drainage from the rectum of abnormal secretions. The primary pathology may be cryptitis, prolapsing hemorrhoids, or a fissure, and if this is cleared up, the pruritus will then often abate. However, there are numerous cases of early idiopathic pruritus without these associated conditions, and it is these that we are all called upon to see at one time or another. The best treatment is cleanliness and dryness. After a stool, the parts should be cleansed and dried with soft tissue, like Kleenex, or a soft cloth, either using a mild soap such as ivory, or no soap at all. Full-strength witch hazel is then applied and the parts dried again, after which a dusting powder such as zinc stearate is applied and a small piece of cotton worn throughout the day to absorb any moisture and to keep the buttocks from rubbing against each other. A solution of 1% aqueous gentian violet may be applied in the office and used by the patient at home for several days, but this should not be employed excessively, and all other local applications of ointments should be discontinued. This regime is effective in a good percentage of cases if properly adhered to. Of course, if fungus infection becomes a secondary invader, as it frequently does in moist areas, this must be treated initially, and the usually associated "athlete's foot" likewise must be eradicated.

I would like to say just a few words about the injection treatment of hemorrhoids, and dispense with this subject hurriedly. The only form of hemorrhoids which is suitable for injections is the uncomplicated, small, bleeding, internal hemorrhoid without prolapse, thrombosis, or ulceration. If one limits the indications for such therapy and explains to the patient that only temporary palliation may result then one is justified in employing this method. As a rule, we use a solution of 5% phenol in cottonseed oil, as this produces satisfactory fibrosis. The material should be injected into the submucosa just above the apex of the hemorrhoid, and not into the vein itself, producing in effect a periphebitis with obliteration of the varices.

Fecal impactions are frequently observed in the ill and aged, and often go unrecognized because the patient is having frequent stools, the material

actually passing around the impaction and gradually enlarging it until obstipation exists. After breaking up the impaction manually as much as possible, several methods may be employed for its complete evacuation. A milk and molasses enema, one pint of each, is often very satisfactory. Another good combination is 3 or 4 ounces of glycerine in a quart of water or saline, plus no more than 4 ounces of hydrogen peroxide. Peroxide should never be used in a strength greater than 1 part in 8. The use of the hydroscopic bulk laxatives will occasionally result in fecal impactions, especially in individuals who have been chronic laxative users for many years. It is, therefore, better in these instances to allow them to take small doses of their habitual laxative along with the bulk.

The last subject that I wish to take up is the matter of rectal bleeding. It has been stated that as high as 25% of cancers of the rectum seen in the larger medical centers have had previous recent rectal surgery with the cancer passing unnoticed. I would like to urge that all patients who come to the office with any ano-rectal complaint be submitted to at least a digital rectal examination. The great majority of the precancerous lesions or polyps are relatively asymptomatic, a certain percentage having no symptoms at all, and these, of course, will not be found unless a sigmoidoscopic examination is performed. It is my honest opinion that every patient past the age of 45 should have at least a proctoscopic examination, as the great majority of polyps and cancers are found in the rectum and recto-sigmoid. It has been found that in routine sigmoidoscope examinations of large numbers of completely asymptomatic patients, as high as 8% were found to have polyps, and 2% had true carcinomas. It, therefore, behooves all of us, if we are to lower the incidence of cancer of the rectum and improve our 5-year cure rates, to perform a careful digital examination on all bleeding patients, plus an endoscopic study of the rectum and recto-sigmoid in the symptomatic patients of all ages, and a routine similar study in all patients past the age of 45, if practically possible. This should be done just as routinely as vaginal and ear, nose and throat examinations are performed. Cancer of the rectum is the second most common malignancy in males and the third most common in females, and I feel so strongly about this matter that I am attempting to instruct all the medical students who participate in the rectal clinic at the University in the use of the sigmoidoscope.

ANNOUNCEMENT OF POST-GRADUATE COURSES

The Department of Otolaryngology and Ophthalmology will hold the following course on December 12, 13, and 14, 1951.

- Radical Mastoidectomy—Charles Watkins, M.D.
- Cysts and Tumors of the Head and Neck—A. J. Brizzolara, M.D.
- Nasal Allergy—A. J. Brizzolara, M.D.
- Radiation Therapy of Ear, Nose, and Throat Tumors—I. Meschan, M.D.
- Ophthalmoscopic Findings in Relation to General Diseases—R. Cook, M.D.
- Tumors of the Lids and Eyeballs—Everett C. Moulton, Jr., M.D.
- Sub-Acute Conjunctivitis—J. Forrest Henry, Jr., M.D.
- Psychological Aspects of Tonsillectomy—William G. Reese, M.D.
- Vasomotor Rhinitis—Carl C. Hanchey, M.D.
- Headaches—Sam E. Roberts, M.D.
- Direct Laryngoscopy—Sam E. Roberts, M.D.
- The Problem of Anesthesia in Operations of the Head and Neck—E. Rushia, M.D.
- Virus Infections of Ear, Nose, and Throat—Norman N. Fein, M.D.
- Foreign Bodies in the Air and Food Passages—John W. Smith, M.D.
- Otosclerosis—Frank S. Forman, M.D.
- The Physiological Aspects of Rhinoplasty—Frank S. Forman, M.D.
- Cross Eyes—James L. Smith, M.D.
- Injuries to the Eye—R. J. Calcote, M.D.
- Carcinoma of the Esophagus—James H. Growdon, M.D.
- Early Diagnosis of Glaucoma—K. W. Cosgrove, M.D.

This is the first Post-graduate Course in Ophthalmology and Otolaryngology to be given by the University of Arkansas School of Medicine in cooperation with the Arkansas State Medical Society and the Arkansas Academy of General Practice. Since studies have shown that from 25 to 35 per cent of general practice consists of treatment of diseases of the eye, ear, nose and throat, the program is arranged to give practical help to the general practitioner and to show the trend of more recent concepts in Otolaryngology and Ophthalmology to those physicians specializing in eye, ear, nose and throat. Ample time will be allotted for discussion and for exchange of ideas on any of the subjects discussed. In addition, there will be a demonstration by the Junior League Speech and Hearing School and a conference with diagnostic problems in Otolaryngology.

THE JOURNAL

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EDITORIAL

FLUORIDATION OF WATER

Authorities in the field of dental health have
taken strong stand in recommending widespread
adoption of fluoridation of water supply as a
means of markedly restricting the incidence of
dental caries. Carefully-controlled, large-scale
studies in various parts of the nation have shown
that this preventive measure may eliminate as
much as one-half or more of tooth decay in chil-
dren. The outstanding experiment has been at
Newburgh-Kingston, New York, where a 30% re-
duction in tooth decay has been reported in the
first three years after fluoride was put into the
water supply. Five years later, six-year-old chil-

dren in Newburgh had only about one-fourth as
much tooth decay as was found in the adjacent
control city of Kingston.

For a number of years it has been recognized
that the incidence of tooth decay was much less
in certain parts of the country, as Texas, Colorado
and the Dakotas, where fluorides were present in
the natural water supply than in other parts of
the country. From these observations experi-
mental testing has led to the important results
now a matter of record in many American com-
munities.

At least three Arkansas towns now employ flu-
oridation of the water supply and it is a matter
of discussion in several others.

Fluorides, of course, are poisonous, but a fluo-
rine content of one part per million is obviously
much too small to be considered even remotely
harmful. There are no reported instances of harm-
ful effects, or even of tooth mottling, which does
exist in areas where the fluorine content exceeds
this small amount. No taste or odor can be de-
tected in fluoridated water and there is no evi-
dence that it will exert deleterious effects on the
products of dairies, bakeries and other such food
plants. Yearly cost ranges from four to fourteen
cents per person. Cost of equipment varies
widely according to the size of the community
to be served.

It would seem that the question as to the safety,
the good to be derived, the control of the amount
to be used, and the low cost, merit the serious
consideration of physicians and citizens of the
State of Arkansas, and may well be answered in
the affirmative as a measure to prevent dental
caries.

INFORMATION FOR MEMBERS

This issue of The Journal contains the roster of
members of the Society for the year 1951 and has
been conveniently placed in the mid-section
where it may be readily removed for filing. As
an additional service to our membership, legal
counsel has prepared a summary of Arkansas stat-
utes pertaining to the practice of medicine now
in effect. It is hoped that these will prove of
value not only in the reading thereof but as a
reference source. Such a compilation was last
published in December, 1946, and this latest revi-
sion includes Acts of the Legislature since that
date as well as other laws which are of particular
interest to physicians.

RANDOM THOUGHTS OF THE SECRETARY

October 27th. With foreboding skies and twice turned back by high water, journeying to see Oklahoma versus Colorado at Norman, the weather improving but Colorado does not, and this pre-season pick confirms our judgment only in that Oklahoma does have an excellent team.

October 28th. With the Ralph Kramers and the Bob Thompsons to see the magnificently staged and ever-beautiful "Ice Cycles" at Tulsa, an afternoon and evening with youth which brings much enjoyment to us.

November 4th. Back in the forests off Highway 71 this afternoon, up and down hill, rewarded by deer "sign" in numbers and a bang-up thrill in following tracks of an elk, an unusual inhabitant of Arkansas, departing with the waning afternoon in great hopes that when we again return November 12th the opportunity will be afforded our trigger finger to bring home venison.

November 12th. Heading forth in a driving rain to the hills east of West Fork at five this morning, tail lights ahead of us in a procession like unto departure from a football game, trudging through mud and water, demonstrating the superiority of man over beast, the wily deer having taken refuge in relatively dry brush, where, so far as we are concerned, they remain for the live-long day, but not so we who traverse up hill and across creek in fruitless search and might well had we accepted Dickinson's invitation where, at least, we could have kept under cover as we waited for a deer who did not come to the party.

November 18th. Persisting in the hope that there may be ears to listen the touring team visits Batesville receiving oracious social attention at luncheon by the Independence County Medical Society and at an afterglow with the Monforts, grateful for the some 17 or 19 district members who spent the afternoon with the speakers * * * homeward calling on the Millards hospitalized by accident, fortunate indeed not a tragedy.

November 22nd. The Day of Thanksgiving brings a troubled world, a world torn in strife and uncertainties, where honor and integrity appear decidedly on the wane, where propaganda emanates in lieu of information; in short, a world where it seems opportune to give thanks but to keep up your target practice.

LILLY TO FEATURE "MEDICINE IN AMERICA" PAINTING SERIES

As part of a widespread campaign to publicize the unique qualities and benefits of American medicine, Eli Lilly and Company is featuring a "Medicine in America" series of paintings in its bi-monthly house organ, "Physician's Bulletin," through the year 1952.

Six scenes have been chosen to illustrate representative aspects of America's unique patient-physician relationship. These will appear as a cover-flap in each issue and may be torn out and displayed in physicians' waiting rooms. The important message the paintings tell will thus have the attention of those who will have great influ-

ence on the form in which medicine in America will be practiced.

The pre-eminent place which American medicine holds in the world today, as the "Physician's Bulletin" series points out, is largely due to the many freedoms that patients as well as medical research and medical practice enjoy in this country. At this time of crucial decision, however, only an enlightened people, fully aware of the rich heritage of their freedoms, will act effectively to perpetuate those freedoms.

Eli Lilly and Company is giving similar expression to these realizations by its membership in the Health Information Foundation. This organization, of which Admiral W. H. P. Blandy, U.S.N. (Ret.), is the president, is a fact-finding group now working in full gear via 221 radio programs, television, the press, special publications, and other lines of communication to stimulate the American people to face their own medical needs squarely and with their own community resources. The chief inspiration behind this work is primarily a deep faith in the will of the people and in the effectiveness of individual responsibility forcefully expressed at local levels.

The "Medicine in America" series of paintings, executed for Eli Lilly and Company by several well-known artists, will thus help to emphasize the conviction that an aroused home-town America is the most formidable bulwark against the many threats to freedom in our country.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The fifteenth annual meeting of The New Orleans Graduate Medical Assembly will be held March 10-13, 1952, headquarters at the Municipal Auditorium.

Eighteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. In addition, the program will include symposia on "Resuscitation" and "Complications of Antibiotic Therapy and Their Management," daily demonstrations of medical and surgical procedures in color television, clinicopathologic conferences, medical motion pictures, over 100 technical exhibits and three round-table luncheons.

Details of the New Orleans meeting and the post-clinical tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, Louisiana.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

OBSTACLES TO THE ERADICATION OF TUBERCULOSIS

JAMES PERKINS, M. D.

A Lecture Endowed by Michigan Tuberculosis Association,
December 4, 1950.

There has been widespread publicity and jubilation over the drop in the tuberculosis death rate from the peaks of about 200 deaths per 100,000 population at the turn of the century to the provisional death rate of 26.1 for 1949.

It is good news! Unfortunately, many have the impression that tuberculosis is a problem that is already solved. Yet tuberculosis is the principal communicable disease for the world as a whole. It is estimated that between 3,000,000 and 5,000,000 people die each year throughout the world from tuberculosis. Even in the United States, it causes nearly 40,000 deaths per year. It is the chief cause of death in the United States in the important child-bearing and child-rearing ages of 15 to 34. Because so many people die from tuberculosis in the prime years of life, it causes a potential loss of years of life approximately equal to cancer, and not far behind the combination of diseases called "heart diseases." Today, more cases of tuberculosis are known than ever before, due largely to our improved case-finding programs, and there is good reason to believe that the death rate is dropping faster than the prevalence of tuberculosis. Although eradication is the objective of all voluntary and official health agency workers concerned with the tuberculosis problem, eradication is still a long way off.

There are many obstacles to be overcome—obstacles closely related to the four basic activities in tuberculosis control, namely, case finding, treatment, increasing human resistance to tuberculosis, and research. For these activities, numerous tools and techniques are needed. Some of these are an adequate number of trained personnel, adequate physical facilities, health education, laws and regulations, record systems and statistical analyses, and adequate financing.

The chest X-ray of the apparently well adult is probably the most important aspect of case finding. While the annual physical examination, including a chest X-ray, for every adult is still advised, a more practical goal from the standpoint

of tuberculosis control is the annual chest X-ray without the complete physical examination. In a series of fast-tempo, short period, large city chest X-ray campaigns since 1947, over 4,000,000 people have been X-rayed. This is a remarkable undertaking. In these campaigns, about 0.3 per cent significant tuberculosis has been discovered and most of them were previously unknown to the health departments. Ideally, there should be adequate facilities for every adult to have a free chest X-ray every year in his own community.

Treatment properly includes all aspects of supervision and guidance of the patient and his family from diagnosis through to recovery or fatal termination. This, then, involves supervision by the health officer and public health nurse; assistance to the family by social workers and welfare authorities; medical therapy; and the whole process of rehabilitation. As with other communicable diseases, an adequate local health department is necessary to conduct such a program.

Supervision of tuberculosis patients is possible only if there are public health nurses available to give this supervision. The public health nurse is the G.I. on the firing line. She must be directed by a competent health officer, and there must be adequate community facilities for hospitalization of the tuberculosis patient and for assistance to his family. But the public health nurses are the combat troops who make or break a tuberculosis control program. It is estimated that about 5,000 more public health nurses are needed for even a minimum public health nursing program.

There is a serious shortage of tuberculosis hospital beds and there is also a serious shortage of the whole gamut of the army of personnel necessary to the smooth running of a tuberculosis hospital. From the standpoint of personnel and of newer developments in therapy, it is increasingly desirable to locate tuberculosis hospitals in proximity to medical centers in the city.

The public and the medical profession still have not accepted universally the fact that tuberculosis is a communicable disease and must be treated as a public health problem. Too often the means test is applied before a tuberculosis patient is per-

mitted to enter a hospital and before welfare assistance is granted to his family.

Another obstacle to more rapid control of tuberculosis is the frequency with which patients leave hospitals against medical advice. Two factors seem to be responsible. The first is the matter of communities providing inadequate assistance to the family. The second factor is failure on the part of hospital personnel to consider adequately the personal and emotional problems of tuberculosis patients. Rehabilitation services are needed also to bridge the gap between the tuberculosis hospital and full employment. Another obstacle in the field of treatment is the lack of a completely satisfactory antibiotic or chemotherapeutic agent. Streptomycin and para-aminosalicylic acid combined have proved very helpful in certain types of tuberculosis. However, the tubercle bacillus readily develops resistance to it.

There are two main aspects to tuberculosis control through increasing resistance to tuberculosis. Probably, the most important factor in the non-specific category is adequate nutrition. There are still many people who lack or fail to utilize the modern knowledge of nutrition or are too poor to provide adequate nutrition for themselves and their families.

With regard to specific active immunization against tuberculosis, the only accepted vaccine available is BCG (Bacillus of Calmette-Guerin). The vaccine is safe and there is evidence that the vaccine is helpful as a supplement but it has definite limitations. There is great need for a better vaccine—one which may be given to everybody; one which is not only safe but without severe reactions; preferably one consisting of killed microorganisms; and one which produces a solid immunity.

All of the obstacles mentioned indicate the need for further research concerning all aspects of tuberculosis—further clarification of its epidemiology; better methods of health education and motivation; increased knowledge of the psychiatric problems of the tuberculous patient and his family; better methods of medical and surgical treatment; improved programs of rehabilitation; the development of a better anti-tuberculosis vaccine; and more precise knowledge of the tubercle bacillus itself—its genetics, physiology, chemical composition, and immunological properties of its various chemical components.

The present world crisis is a threat to the eradication of tuberculosis, as well as to every other ideal of the free peoples of the world. Millions of our citizens will have intimate contact with others

all over the globe in the years to come, including areas of very high prevalence of tuberculosis. Such mixing will be on an unprecedented scale and will occur through troop movements, the program of technical assistance to backward areas, through service in the diplomatic corps, and in commercial ventures.

In spite of the uncertain days ahead, there is reason to believe, however, that eventually the obstacles besetting the free peoples of the world, as well as the obstacles in the control of tuberculosis, will be overcome and we shall finally see the day when the dreadful and unnecessary scourge of tuberculosis is a thing of the past.

PROCEEDINGS OF SOCIETIES

The First Councilor District Medical Society was addressed at Jonesboro November 15th by R. C. Hooper, Jonesboro, "Chronic Neck of Bladder Obstruction in the Male"; William Reece, Little Rock, "Management of Psycho-Somatic Diseases," and by Clark Gillespie, Little Rock, "Management of Obstetric Emergencies."

J. H. McCurry, Secretary.

The Pulaski County Medical Society was addressed November 5th by Anderson Nettleship, "The Medico-Legal Aspects of the Practice of Medicine."

Edwin F. Gray, Secretary.

The Pope-Yell County Medical Society was addressed November 8th by Hugh Rives, Little Rock, on "Office Urology."

W. O. Young, Secretary.

The Ouachita County Medical Society was entertained at dinner in the home of Dr. and Mrs. R. B. Robins in Camden Thursday evening, November 8th.

Program consisted of the following presentations: "Evaluation of Diabetic Management," James T. Wortham, Little Rock; and "Liver Biopsy," Robert W. Talley, Little Rock. Movie, "Use of Gelfoam."

Mr. C. L. Crutchfield was introduced as the Administrator of the new Ouachita County Hospital.

R. B. Robins, Secretary.

The Sebastian County Medical Society was addressed November 13th by Alfred Kahn, Little Rock, "Abdominal Pain."

Art B. Martin, Secretary.

COMPILATION OF ARKANSAS STATUTES OF INTEREST TO THE MEDICAL PROFESSION

MESSRS. BAILEY AND WARREN

Little Rock

The material which follows represents a compilation of the Arkansas statutes which have been enacted through and including 1951, and principally pertain to and should be of interest to the medical profession. This compilation was prepared with a view to providing, in a readily accessible form, the laws which regulate the medical profession within the State of Arkansas.

An effort has been made to identify these statutes with a reference to the section numbers of the Arkansas Statutes, Annotated, 1947, and supplements thereto. However, some of the laws are so recent that they are listed only by act number. Unless otherwise indicated, the section numbers refer to Arkansas Statutes, Annotated, 1947, published by the Bobbs-Merrill Company, which is the most recent codification of all Arkansas statutes.

Some of the acts have been summarized for convenience, but others are quoted verbatim because it would be impossible to give the reader a complete picture of the act by a summary.

No attempt has been made to set out the rules and regulations which have been promulgated by the various commissions, boards and departments created by these various acts. Any requests for information concerning these rules and regulations should be directed to the commission, board or department having jurisdiction of the matter in question.

BASIC SCIENCE LAW

The Arkansas Legislature passed the Basic Science Act in 1929 with some provisions of this Act being amended by subsequent legislatures.

The Act provides that no person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, pathology and hygiene (hereinafter referred to as the Basic Sciences) issued by the State Board of Examiners in the basic sciences.

Any license authorizing the licentiate to offer or undertake to diagnose, treat, operate on, or prescribe for any human pain, injury, disease, de-

formity, or physical or mental condition is a license to practice the healing art.

Board of examiners consists of five members appointed by Governor in addition to Commissioner of Education who shall be a member ex-officio. The members of the Board shall be selected because of their knowledge of the basic sciences aforesaid.

Board has power to make such rules as it deems expedient to carry this Act into effect.

The fee for examination by the Board is \$10.00. Fee for re-examination within 12 months period as provided in Act shall be \$5.00, but the fee for re-examination after the expiration of 12 months is \$10.00. All fees are to be paid to the Board by the applicant at the time of filing application.

Applicants shall take a written examination to determine their knowledge, ability, and skill in the basic sciences. A grade of 75% or more in each of the basic sciences is a passing grade. If the applicant receives less than 75% in one or two subjects and receives 75% or more in each of the remaining subjects, he shall be allowed a re-examination at the next examination, upon application and the payment of the prescribed fee, and shall be required to be re-examined only in those subjects in which he made a grade of less than 75%.

If the applicant receives less than 75% in more than two subjects, he shall not be re-examined within a period of one year next following his original examination.

Requirements for issuance of certificate—

Applicant must submit satisfactory evidence that he is:

- (1) Not less than 21 years of age;
- (2) A person of good moral character;
- (3) Was graduated from an accredited high school or school of similar grade or possessed equivalent educational qualifications;
- (4) Has a comprehensive knowledge of the basic sciences as shown by passing the examination given by the Board.

Applicant denied examination may appeal to circuit court for county in which Board has its office within 30 days after such denial. If in the opinion of the court admission to examination was refused without just cause, the court may order the Board to examine the applicant.

Any basic science certificate and any license to practice the healing art or any branch thereof which is issued contrary to this Act shall be void. A Board which has issued a license by virtue of a void basic science certificate shall revoke or cancel such license.

It is forbidden to practice without a basic science certificate. Violators shall be fined not more than \$100.00 or imprisoned not more than 12 months, or both, in the discretion of the judge.

Any person who shall obtain or attempt to obtain a basic science certificate by any dishonest or fraudulent means, or who shall forge, counterfeit, or fraudulently alter any such certificate, shall be fined not more than \$500.00, or imprisoned not more than 12 months, or both, in discretion of the judge.

Any person obtaining or attempting to obtain a license to practice the healing art or any branch thereof without a valid certificate, shall be fined not more than \$500.00, or imprisoned not more than 12 months, or both, in the discretion of the judge.

Penalty for knowingly issuing or participating in the issuing of a license without a valid certificate is \$500.00 fine, or 12 months imprisonment, or both.

Suit may be instituted within 2 years from date of payment to collect fees paid to unauthorized practitioners.

The State Board of Examiners in the Basic Sciences and the various boards authorized to issue licenses to practice the healing art or any branch thereof shall investigate and make reports of violations.

On or before the first day of March of each year, the secretaries of the various examining boards shall certify to the Secretary of State under the hand and seal of the President and Secretary of the particular examining board, a list of all persons registered with said board for the current year. Secretary of State shall have list printed and mailed to sheriff of each county and the prosecuting attorney of each district, who shall keep it on file in his office for public inspection.

This Act (Sections 72-101—72-120) shall not be construed as applying to dentists, nurses, midwives, optometrists, chiropodists, barbers, cosmeticians, or christian scientists practicing within the limits of their respective callings; nor to other persons licensed to practice the healing arts or any branch thereof in this State when this Act takes effect; nor to persons specifically permitted by law to practice without licenses, practicing within the limits of the privileges thus granted

them; nor to the sale, manufacture or advertising of drugs, medicines, household remedies, chemicals and household preparations, provided that the vendor, maker or advertiser refrains from any attempt to diagnose, and provided further that the provisions of this Act shall not apply to any person who was a resident practitioner of chiropractic on March 22, 1948, and to whom a license to practice chiropractic was issued by the State Board of Chiropractic Examiners prior to said date, and provided further that all chiropractors shall be subject to the same provisions and restrictions as are applicable to physicians and surgeons as set out in the Malpractice Act, being Sections 72-628, 72-629, 72-631—72-633.

This Act is set out in Sections 72-107 through 72-120 of Arkansas Statutes (1947) Ann. & Supp.

MEDICINE AND SURGERY

Medical examining boards—Membership—Appointment.—Medical examiners shall consist of three (3) boards: One of physicians and surgeons, recommended by the Homeopathic Medical Society of Arkansas; one of physicians and surgeons recommended by the Arkansas State Eclectic Medical Society; and one of physicians and surgeons recommended by the Arkansas Medical Society.

Seven members of each board, appointed so as to have one member from each congressional district upon each board. Appointment to be made by Governor from a list of names presented by the respective medical societies. Sec. 72-601.

Terms—Vacancies—Qualifications of board members.—Members first appointed on boards divided into two classes: first class to consist of four members appointed for two years; the second class of three members appointed for four years, and thereafter all appointments shall be for four years.

Vacancies on boards filled as they occur by appointments from lists furnished as provided. No member to be appointed for more than two terms in succession; and no member, or professor or teacher in a medical college or school or university, having a medical department, shall be appointed upon the boards. Sec. 72-602.

Members of eclectic state medical board—Appointment.—The Eclectic State Medical Board consists of seven members appointed by Governor from list of names furnished by Arkansas Eclectic Medical Association. Members may serve from same congressional district at same time, and may succeed themselves any number of times. Sec. 72-603.

Organization of boards.—Within 30 days after

appointment, respective boards shall meet and organize by electing a President, Secretary and Treasurer of their respective boards.

Treasurer shall give bond in amount determined by Board, conditioned for faithful disbursement of all moneys coming into his hands as such Treasurer.

Each board shall have common seal. President and Secretary shall have power to administer oaths for purposes of this Act. Boards to make and adopt all necessary rules, regulations and by-laws not inconsistent with laws of State or of the United States. Members of board shall take oath prescribed by the Constitution of the State for State Officers. Sec. 72-605.

Time and place of meetings.—Boards to hold two stated meetings per year on the third Tuesday in June and the third Tuesday in December, at such places as majority may agree upon, consulting the convenience of the boards and applicants for examination and certificates. Sec. 72-606.

Designations and independence of boards.—Boards to be styled and known as the "Homeopathic State Medical Board," "The Eclectic State Medical Board," and "The State Medical Board of the Arkansas Medical Society." The Homeopathic State Medical Board to examine all applicants who have graduated from Homeopathic Medical Schools, the Eclectic State Medical Board to examine all applicants who have graduated from Eclectic Medical Schools; and the State Medical Board of the Arkansas Medical Society shall examine all other applicants.

Boards shall act separately and independently of each other. Sec. 72-607.

False statements to board.—Person willingly and knowingly making false statement to board concerning his authority to practice medicine shall be deemed guilty of perjury, and may be indicted and tried for such offense, either in county where affidavit to such statement was made, or where such person resides. Sec. 72-608.

Application for license—Fees.—Every person residing in this State, or coming into it, of the age of twenty-one (21) years, who has not heretofore been licensed to practice medicine under existing laws, making application to register under the provisions of this Act, for the purpose of practicing medicine in this State, shall first make application to the secretary of the board, and his application shall be accompanied by a fee of fifteen dollars (\$15.00), this fee being for examination and registration before the board, for a primary examination of the first two years of medical education. For an examination in the last two years of medi-

cal examination, the fee for examination shall be an additional sum of \$10.00, or a total fee for examination for the four-year medical course, of \$25.00. Sec. 72-609.

Qualifications and examination of applicants—Issuance of license—Reciprocity—Fees.—The applicant shall present to the board satisfactory evidence of graduation from a reputable medical school, and a school shall be considered reputable within the meaning of this Act whose entrance requirements and course of instruction have been approved by the Council on Medical Education of the American Medical Association, if a graduate of a regular school, or have been approved by the Council of Medical Education of the National Eclectic Medical Association, if a graduate of an Eclectic school, or have been approved by the American Institute of Homeopathy, if a graduate of a Homeopathic school. Such examinations may be written or oral, or both, and shall be of a practical character and conducted on the scientific branches only, and shall include anatomy, physiology, medical chemistry, materia medica, therapeutics, theory and practice of medicine, pathology, bacteriology, surgery, physical diagnosis, obstetrics, gynecology and hygiene. All questions and answers, with grades attached, shall be preserved by the secretary for one (1) year. If, in the opinion of the board the applicant possesses the necessary qualifications, the board shall issue to him a certificate.

The board may at its discretion, arrange for reciprocity in license with the authorities of States having requirements equal to those established by the board, and every person desiring license by reciprocity must make application to the secretary. Licenses may be granted applicants for license under such reciprocity on payment of a minimum fee of \$50.00, or in case the State from which the applicant desires reciprocity, charges a larger fee for a license by reciprocity, then the fee shall be such sum as such other State charges. A fee of \$15.00 shall be charged by the board for the certification of a licentiate to another State. Sec. 72-610.

Causes for refusal or revocation of license—Hearing.—The boards may refuse to grant or may revoke a license for the following causes, to-wit:

- (a) Chronic and persistent inebriety.
- (b) The practice of criminal abortion, either as principal or abettor.
- (c) Conviction of a crime involving moral turpitude.
- (d) Publicly advertising special ability to treat or cure chronic and incurable diseases.
- (e) The representation to the board of any

license, certificate or diploma which was illegally or fraudulently obtained, or the practice of fraud or deception in passing the examination.

(f) Failure of the applicant to be an American citizen.

In complaint for violating the provisions of this section, the accused person shall be furnished with a copy of the complaint, and given a hearing before said board in person, or by attorney, and any person after such refusal or revocation of license, who shall attempt or continue practice of medicine, shall be subject to the penalties hereinabove described. Sec. 72-611.

Indulgence in alcohol or drugs as grounds for revocation of license.—When any physician or surgeon practicing their respective professions within the State of Arkansas, shall by the habitual indulgence in the use of alcohol, opium, cocaine, or any such agent to such an extent as to render himself incapable thereby of exercising that degree of skill and judgment in the treatment of his patients which the moral trust and confidence reposed in him demands, (he) shall be deemed guilty of a misdemeanor, and his license shall at once be revoked, said license to be revoked by the State Board of Medical Examiners under which said physician or surgeon may have received his license to practice upon the proper proof being made before said board, said license not to be renewed under one (1) year, and not then until said physician or surgeon shall furnish satisfactory evidence of having ceased his indulgences. Sec. 72-612.

Certificate to be filed with county clerk.—Every person receiving a certificate from the board, whether practicing now or hereafter licensed to practice, shall have such certificate recorded in the office of the county clerk where he is practicing or proposes to practice; and, when such person moves to another county for the purpose of continuing the practice of medicine, he shall file for record with the county clerk of the county to which he moves, a certified copy of his certificate. Sec. 72-613.

Temporary permit.—To prevent delay and inconvenience any member of the board applied to, provided that the board applied to represents the school of medicine from which the applicant graduated, may grant a temporary permit to practice upon the payment of the fee required for applicants, and after satisfactory examination; such permit shall not continue in force longer than the next regular stated meeting of the board, and shall not be granted for a longer period than two

(2) months in advance of the next regular and stated meeting of the board. Sec. 72-614.

Practice without license—Penalty—Exception.—Every person who shall practice, or shall attempt to practice medicine in any of its branches, or, who shall perform or attempt to perform any surgical operation for any person, or upon any person within this State without first having complied with the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon the conviction thereof, shall be punished by a fine of not less than twenty-five (\$25.00) dollars, nor more than five hundred (\$500.00) dollars; or by imprisonment in the county jail for a period of not less than ten (10) days, nor more than ninety (90) days; or, by both fine and imprisonment; and each day of such practice shall constitute a separate offense.

Provided, however, that this shall not apply to persons now engaged in the practice of medicine until ninety (90) days after the passage of this Act, the time allowed them for procuring their certificate. Sec. 72-615.

Itinerant vendors of drugs violators of law.—Any itinerant vendor of any drug, nostrum, ointment or application of any kind, intended for the treatment of disease or injury, or who may, by writing, print or other methods, profess to cure or treat, diseases or deformity by any drug, nostrum, manipulation, or other expedient, in this State, shall be deemed to be in violation of this law and punished as provided. This does not apply to persons who obtain certificates, as herein provided. Sec. 72-616.

"Practicing medicine" defined—Persons excepted from application of act.—Any person shall be regarded as practicing medicine, in any of its departments, within the meaning of this Act, who shall append M.D. or M.B. to his name; or repeatedly prescribe or direct, for the use of any person or persons, any drug or medicine or other agency for the treatment, cure, or relief of any bodily injury, deformity or disease.

Provided, that nothing in this Act shall be so construed as to prevent any person from administering domestic remedies without receiving any compensation therefor, and nothing herein shall apply to the so-called midwife. Sec. 72-617.

Annual registration required of eclectics—Fees.—From and after the passage of this Act, every person having a license to practice medicine and surgery in the State of Arkansas issued by the Eclectic Medical Examining Board shall pay an annual registration fee of two dollars (\$2.00) if a resident of the State of Arkansas, and an annual registration fee of four dollars (\$4.00) if a non-

resident of the State of Arkansas. Sec. 72-620.

Due and delinquent dates for fees of eclectics.

—The registration fee of two dollars (\$2.00) for residents and four dollars (\$4.00) for non-resident physicians shall become due on and after the passage of this Act, and delinquent sixty (60) days thereafter. The registration fee of two dollars (\$2.00) for residents and four dollars (\$4.00) for non-resident physicians shall become due on January 1st of each year and delinquent on the succeeding March 1st thereafter, payable to the secretary of the Eclectic Medical Examining Board. Sec. 72-621.

Failure to pay eclectic registration fees—Penalties.

—Failure to pay the annual registration fee within the time stated shall automatically suspend the right of any licentiate to practice his or her profession while delinquent. If any licentiate fails for three (3) consecutive years to pay this fee it shall be the duty of the Eclectic Medical Examining Board without hearing or notice to cancel his or her license subject to reinstatement. If application for reinstatement is made the Board shall reconsider the moral character and professional qualifications of the applicant upon notice and hearing before ordering reinstatement, and unless such showing shall thereupon be made to the Board as would entitle the applicant to the issuance of an original license, reinstatement shall be denied. The applicant for reinstatement shall file a written application and pay the same fees required for the issuance of an original license. Any person practicing his or her profession while his or her license is suspended or after it has been cancelled pursuant to the foregoing provisions shall be subject to the penalties prescribed by law. These penalties prescribe, amongst others, that any person convicted of not complying with the provisions of this Act shall be punished by a fine of not less than fifty dollars (\$50.00) nor more than three hundred dollars (\$300.00) or by imprisonment in the county jail for not less than ten (10) days nor more than thirty (30) days, or both. Sec. 72-622.

Annual registration required of licensees of medical board of Arkansas Medical Society—

Expiration of license on failure to renew.—A license or re-registration of \$2.00 for residents and \$4.00 for non-residents is hereby imposed upon each physician to whom there has been issued a license by the State Medical Board of the Arkansas Medical Society. For the year 1941, the fee shall be \$2.00 and shall be paid on or before July 1st. Thereafter the amount shall be fixed by the board, not less than 60 days in advance of January 1st of each year, at which time the annual

re-registration license shall be due and payable. Failure to pay the annual license fee as herein provided, before March 1st of each year, shall automatically suspend such delinquent physician from the practice, and his license shall automatically expire. Sec. 72-623.

Restatement of delinquent licentiate.—Any delinquent licentiate may be reinstated by paying all delinquent fees and a penalty of one dollar (\$1.00) for each year, or part thereof, that he has been delinquent. Sec. 72-624.

Revocation of delinquent's license—Application for reinstatement.—If any licentiate fails for three consecutive years to pay said fee, it shall be the duty of the State Medical Board of the Arkansas Medical Society, without hearing or notice, to cancel and revoke his or her license, subject to reinstatement. If application for reinstatement be made, the board shall consider the moral character and professional qualifications of the applicant upon notice and hearing before ordering reinstatement, and unless such showing shall thereupon be made to the board as would entitle the applicant to the issuance of an original license, reinstatement shall be denied. The applicant for reinstatement shall file a written application and pay the same fees required for the issuance of an original license. Any person practicing his or her profession while his or her license is suspended, or after it has been cancelled pursuant to the foregoing provisions, shall be subject to the penalties prescribed by law. Sec. 72-625.

Use of funds.—Funds thus realized shall be expended for the publication of the medical practice act; preparing and publishing a compilation of physicians; investigating violations of the medical practice act and for such other purposes as may be directed by the board. Sec. 72-626.

Disbursement of funds—Compensation and expenses of board—Regulations.—All moneys received by the board shall be disbursed by the treasurer upon warrant of the secretary, countersigned by the president of the board. The members of the board shall receive as compensation for their services the sum of \$100.00 per year, plus their reasonable expenses while engaged in the discharge of their duties, while away from home.

The secretary shall receive such additional salary as may be fixed by the board.

The funds coming into the possession of the board, after the charges and expenses of the board as herein stated, shall be expended for the purpose designated in section four hereof; but if, at the end of the year, there should be a greater revenue derived than sufficient to meet all obli-

gations, such surplus shall remain in the treasury of the board, to be used in expenditures of the board during succeeding years. •

It shall not be lawful for the board, or any member thereof, in any manner whatever, or for any purpose, to charge or obligate the State for the payment of any money whatever.

The board shall have authority to promulgate and put into effect such rules and regulations as are necessary to carry out the purposes of this Act. Sec. 72-627.

Soliciting patients unlawful—Making false statements—Practicing while drunk—Penalties.—

Any physician, surgeon, or person engaged in the practice of medicine in this State (who shall), for the purpose of procuring patients, employ any solicitor, capper or drummer, or shall subsidize or employ any hotel or boarding house, or advertise his business or remedies by untruthful or improbable statements made in his advertisements, circulars or cards, or who shall obtain any fee or compensation from anyone by any assurance or promise that a manifestly incurable disease is curable, or who shall willfully betray or expose any professional secret learned by him from his patient or patron, to the detriment of such patient or patron, or who shall become a habitual drunkard and continue the practice of medicine or surgery while such habitual drunkard, or administer any medicine or perform any operation while drunk, shall be deemed guilty of a misdemeanor, and on conviction be punished by a fine of not less than twenty-five (\$25.00) dollars and not more than two hundred (\$200.00) dollars, and by a revocation of his license to practice medicine and surgery, which revocation shall be adjudged and pronounced by the same court in which he is tried and convicted, and at the same time. Sec. 72-628.

Revocation of license for conviction of crime involving moral turpitude.—Whenever any physician and surgeon or person engaged in the practice of medicine or surgery in this State shall hereafter be convicted of any crime against the laws of the State of Arkansas or of the United States government involving moral turpitude, in addition to the other penalty or penalties imposed upon him, the court trying the case may suspend or revoke his or her license to practice medicine or surgery in the State of Arkansas. Sec. 72-629.

Board may revoke license in event of leniency by court—Exception.—Provided that a suspension of sentence, or the placing of the one convicted on probation or other leniency granted by the court, or that the one convicted has not been required to suffer the penalty prescribed in the judgment after conviction, shall not serve to pre-

vent the Board from revoking the license to practice medicine of the person so convicted; provided further, that in the event the court before whom such person was tried and convicted has declined to suspend or revoke the license of such person, then in such event the Board shall not have the power to suspend or revoke said license. Sec. 72-630.

Committing abortion—Penalty—Revocation of license.—If any physician or surgeon or other person engaged in the practice of medicine shall commit the crime of abortion, or aid or abet in the commission thereof; provided, this section shall not apply to any abortion produced by any regular practicing physician, for the purpose of saving the mother's life, he shall be adjudged guilty of a felony and punished by imprisonment in the State penitentiary for a period of not less than one (1) year nor more than five (5) years, and his license to practice shall be revoked. Sec. 72-631.

Appeal from order revoking license.—Any physician and surgeon or person whose license to practice shall, on conviction under the provisions of this Act (Sec. 72-628, 72-629, 72-631—72-633), (be) revoked, may appeal from the judgment of conviction, but shall not, pending the appeal, be permitted to practice either medicine or surgery, and that if he does so practice, or attempts or offers to so practice pending the appeal, he shall be punished in the same manner and to the same extent as if he had never had any license to practice. Sec. 72-632.

Application for new license.—After the expiration of one (1) year from the date of the revocation of the license of any physician and surgeon, under this Act (Sec. 72-628, 72-629, 72-631—72-633), he may appeal to the proper medical board for a new license, and may be relicensed, if he shall satisfy the board that he is qualified, has reformed and is worthy. Sec. 72-633.

RECORD OF LICENSES

Lists of Practitioners to Be Made and Filed

It is hereby made the duty of each of the medical examining boards, to-wit: The Homeopathic State Medical Board, the Eclectic State Medical Board, the State Medical Board of the Arkansas Medical Society, the State Board of Osteopathic Examiners, and the State Board of Chiropractic Examiners, to file with the Secretary of State, within six (6) months after the passage and approval of this Act, a list of the names of all persons who have been licensed to practice the healing art by the respective boards, within the past twenty (20) years, if said board has been in existence so long; if not, since its organization,

giving the date of their license to practice the healing art in this State, and their last known post-office address. Information shall also accompany said list of names showing whether the said license was granted on examination before the board, or by reciprocity, and if by reciprocity, what state license was so recognized, or if granted on a diploma, from what school or medical college issued. Said list shall be verified by the affidavit of the secretary of the respective boards, issuing and filing the same. Sec. 72-201.

Lists of Future Licentiates to Be Filed

It is further made the duty of the secretary of each of said boards named in Section 1 hereof, to file with the Secretary of State, the name and the other information required by Section 1 hereof, of all licenses to be issued in the future by the respective boards, within one week of the issuance thereof. Sec. 72-202.

List of Licentiates Compiled by Secretary of State

The Secretary of State shall compile said lists of licentiates of the healing art, when filed by said boards, in a well-bound book to be kept by him for that purpose, and he shall from time to time, as additional names are filed with him by the respective boards, so record the same in said book, together with the other information furnished by said boards. Sec. 72-203.

Deaths of Licensed Persons Reported and Noted

The State Health Officer shall report the death of all persons licensed by any of the boards named in Section 1 hereof, to the Secretary of State, within a reasonable time after such information has been received in his office. The Secretary of State shall thereupon note after the name of the decedent, the fact of his death and the date thereof. Sec. 72-204.

Penalty for Violating Provisions of Act

Any violation of the provisions of this Act shall constitute a misdemeanor and be punished by a fine of not less than \$100.00 nor more than \$500.00, or by imprisonment not exceeding ten (10) days. Sec. 72-205.

PREVENTION OF DISEASES

State Cancer Commission

Legislation was enacted in 1945, Act No. 277, creating a commission to be known and designated as the State Cancer Commission which shall be composed of the Governor, the Chairman of the Committee on Cancer Control of the Arkansas Medical Society, and three other citizens of the State to be appointed by the Governor. Two of the appointive members shall be members of the Arkansas Medical Society and

the third appointive member shall not be a member of the medical profession.

The Commission shall conduct cancer clinics in such parts of the State as they may deem advantageous for the public welfare and shall engage in a program of cancer education in cooperation with established cancer educational organizations, utilizing therefor the facilities of such cancer educational organization, private physicians and hospitals in the State and the University School of Medicine.

The Commission shall from time to time make studies of the cancer situation in Arkansas as they may deem advisable, and report their recommendations to the legislature, the State Board of Health, and to the Arkansas Medical Society.

The Commission may furnish medical, hospital and domiciliary care in the State for indigent or partly indigent patients suffering from cancer out of the moneys available. The Commission is authorized to receive voluntary contributions for the purposes of this Act. Secs. 82-601 through 82-606.

Pregnant Women to Be Tested for Syphilis

Every physician attending pregnant women in this State for conditions relating to their pregnancy during the period of gestation and/or at delivery shall, in the case of every woman so attended, take or cause to be taken a sample of venous blood of such woman at the time of first examination, and shall submit such sample to an approved laboratory for a standard serological test for syphilis. Every other person permitted by law to attend pregnant women in the state, but not permitted by law to take blood samples, shall cause a sample of blood of such pregnant woman to be taken by or under the direction of a physician duly licensed to practice medicine and surgery and have such sample submitted to an approved laboratory for a standard serological test for syphilis.

For the purpose of this Act (82-607—82-609) a standard serological test shall be a test for syphilis approved by the State Health Officer, Arkansas State Board of Health and shall be made at a laboratory approved to make such tests by the State Health Officer, Arkansas State Board of Health. Such laboratory tests as are required by this Act shall be made on request without charge at the State Hygienic Laboratory, Arkansas State Board of Health.

In reporting every birth and stillbirth, physicians and others required to make such reports shall state on the certificate whether a blood test for syphilis has been made upon a specimen of blood taken from the woman who bore the child

for which a birth or stillbirth certificate is filed and the approximate date when the specimen was taken. Secs. 82-607 through 82-609.

UNIFORM NARCOTIC DRUG ACT DEFINITIONS

The following words and phrases, as used in this Act, shall have the following meanings, unless the context otherwise requires:

- (1) "Person" includes any corporation, association, co-partnership, or one or more individuals.
- (2) "Physician" means a person authorized by law to practice medicine in this State and any other person authorized by law to treat sick and injured human beings in this State and to use narcotic drugs in connection with such treatment.
- (3) "Dentist" means a person authorized by law to practice dentistry in this State.
- (4) "Veterinarian" means a person authorized by law to practice veterinary medicine in this State.
- (5) "Manufacturing" means a person who by compounding, mixing, cultivating, growing, or other process, produces or prepares narcotic drugs, but does not include an apothecary who compounds narcotic drugs to be sold or dispensed on prescriptions.
- (6) "Wholesaler" means a person who supplies narcotic drugs that he himself has not produced nor prepared, on official written orders, but not on prescriptions.
- (7) "Apothecary" means a licensed pharmacist as defined by the laws of this State and, where the context so requires, the owner of a store or other place of business where narcotic drugs are compounded or dispensed by a licensed pharmacist; but nothing in this Act shall be construed as conferring on a person who is not registered nor licensed as a pharmacist any authority, right, or privilege, that is not granted to him by the pharmacy laws of this State.
- (8) "Hospital" means an institution for the care and treatment of the sick and injured, approved by the State Health Officer as proper to be entrusted with the custody of narcotic drugs and the professional use of narcotic drugs under the direction of a physician, dentist, or veterinarian.
- (9) "Laboratory" means a laboratory approved by the State Health Officer as proper to be entrusted with the custody of narcotic drugs and the use of narcotic drugs for scientific and medical purposes and for purposes of instruction.
- (10) "Sale" includes barter, exchange, or gift, or offer therefor, and each such transaction made

by any person, whether as principal, proprietor, agent, servant, or employee.

(11) "Coca leaves" includes cocaine and any compound, manufacture, salt, derivative, mixture, or preparation of coca leaves, except derivatives of coca leaves which do not contain cocaine, ecgonine, or substances from which cocaine or ecgonine may be synthesized or made.

(12) "Opium" includes morphine, codeine, and heroin, and any compound, manufacture, salt, derivative, mixture, or preparation of opium, but does not include apomorphine or any of its salts.

(13) "Cannabis" includes all parts of the plant *Cannabis sativa* L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds, or resin; but shall not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, and other compound, manufacture, salt, derivative, mixture or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination.

(14) "Narcotic drugs" means coca leaves, opium, cannabis, and every substance neither chemically nor physically distinguishable from them.

(15) "Federal Narcotic Laws" means the laws of the United States relating to opium, coca leaves, and other narcotic drugs.

(16) "Official written order" means an order written on a form provided for that purpose by the United States Commissioner of Narcotics, under any laws of the United States making provision therefor, if such order forms are authorized and required by federal law, and if no such order form is provided, then on an official form provided for that purpose by the State Health Officer.

(17) "Dispense" includes distribute, leave with, give away, dispose of, or deliver.

(18) "Registry number" means the number assigned to each person registered under the Federal Narcotic Laws. Sec. 82-1001.

Acts Prohibited

It shall be unlawful for any person to manufacture, possess, have under his control, sell, prescribe, administer, dispense, or compound any narcotic drug, except as authorized in this Act. Sec. 82-1002.

Licenses of Manufacturers and Wholesalers

No person shall manufacture, compound, mix, cultivate, grow, or by any other process produce or prepare narcotic drugs, and no person as a

wholesaler shall supply the same, without having first obtained a license so to do from the State Health Officer. Sec. 82-1003.

Qualification for Licenses

No license shall be issued under the foregoing section unless and until the applicant therefor has furnished proof satisfactory to the State Health Officer.

(a) That the applicant is of good moral character or, if the applicant be an association or corporation, that the managing officers are of good moral character.

(b) That the applicant is equipped as to land, buildings, and paraphernalia properly to carry on the business described in his application.

No license shall be granted to any person who has within five (5) years been convicted of a willful violation of any law of the United States, or of any State, relating to opium, coca leaves, or other narcotic drugs, or to any person who is a narcotic drug addict.

The State Health Officer may suspend or revoke any license for cause. Sec. 82-1004.

Sale by Manufacturer or Wholesaler on Written Orders—Unlawful Possession or Use

A duly licensed manufacturer or wholesaler may sell and dispense narcotic drugs to any of the following persons, but only on official written orders:

(a) To a manufacturer, wholesaler, or apothecary.

(b) To a physician, dentist, or veterinarian.

(c) To a person in charge of a hospital, but only for use by or in that hospital.

(d) To a person in charge of a laboratory, but only for use in that laboratory for scientific and medical purposes.

(2) A duly licensed manufacturer or wholesaler may sell narcotic drugs to any of the following persons:

(a) On a special written order accompanied by a certificate of exemption, as required by the Federal Narcotic Laws, to a person in the employ of the United States Government or of any state, territorial, district, county, municipal, or insular government, purchasing, receiving, possessing, or dispensing narcotic drugs by reason of his official duties.

(b) To a master of a ship or a person in charge of any aircraft upon which no physician is regularly employed, or to a physician or surgeon duly licensed in some State, Territory, or the District of Columbia, to practice his profession, or to a retired commissioned medical officer of the United States Army, Navy, or Public Health Service employed upon such ship or aircraft, for the actual medical needs of persons on board of such ship or

aircraft, when not in port. Provided: Such narcotic drugs shall be sold to the master of such ship or person in charge of such aircraft or to a physician, surgeon, or retired commissioned medical officer of the United States Army, Navy, or Public Health Service employed upon such ship or aircraft only in pursuance of a special order form approved by a commissioned medical officer or acting assistant surgeon of the United States Public Health Service.

(c) To a person in a foreign country if the provisions of the Federal Narcotic Laws are complied with.

Use of Official Written Orders

(3) An official written order for any narcotic drug shall be signed in duplicate by the person giving said order or by his duly authorized agent. The original shall be presented to the person who sells or dispenses the narcotic drug or drugs named therein. In the event of the acceptance of such order by said person, each party to the transaction shall preserve his copy of such order for a period of two (2) years in such a way as to be readily accessible for inspection by any public officer or employee engaged in the enforcement of this act. It shall be deemed a compliance with subsection if the parties to the transaction have complied with the Federal Narcotic Laws, respecting the requirements governing the use of order forms.

(4) POSSESSION LAWFUL. Possession of or control of narcotic drugs obtained as authorized by this section shall be lawful if in the regular course of business, occupation, profession, employment, or duty of the possessor.

(5) A person in charge of a hospital or of a laboratory, or in the employ of this State or of any other state, or of any political subdivisions thereof, or a master of a ship or a person in charge of any aircraft upon which no physician is regularly employed, or a physician or surgeon duly licensed in some State, Territory, or the District of Columbia, to practice his profession, or a retired commissioned medical officer of the United States Army, Navy, or Public Health Service employed upon such ship or aircraft who obtains narcotic drugs under the provisions of this section or otherwise, shall not administer nor dispense nor otherwise use such drugs, within this State, except within the scope of his employment or official duty, and then only for scientific or medical purposes and subject to the provisions of this Act. Sec. 82-1005.

Sales by Apothecaries

(1) An apothecary, in good faith, may sell and dispense narcotic drugs to any person upon a writ-

ten prescription of a physician, dentist, or veterinarian, dated and signed by the person prescribing on the day when issued and bearing the full name and address of the patient for whom, or of the owner of the animal for which, the drug is dispensed, and the full name, address, and registry number under the Federal Narcotic Laws of the person prescribing it, if he is required by those laws to be so registered. If the prescription be for an animal, it shall state the species of animal for which the drug is prescribed. The person filling the prescription shall write the date of filling and his own signature on the face of the prescription. The prescription shall be retained on file by the proprietor of the pharmacy in which it is filled for a period of two (2) years, so as to be readily accessible for inspection by any public officer or employee engaged in the enforcement of this Act. The prescription shall not be refilled.

(2) The legal owner of any stock of narcotic drugs in a pharmacy, upon discontinuance of dealing in said drugs, may sell said stock to a manufacturer, wholesaler, or apothecary, but only on an official written order.

(3) An apothecary, only upon an official written order, may sell to a physician, dentist, or veterinarian, in quantities not exceeding one ounce at any one time, aqueous or oleaginous solutions of which the content of narcotic drugs does not exceed a proportion greater than twenty per cent of the complete solution, to be used for medical purposes. Sec. 82-1006.

Professional Use of Narcotic Drugs

(1) **PHYSICIANS AND DENTISTS.** A physician or a dentist, in good faith and in the course of his professional practice only, may prescribe, administer, and dispense narcotic drugs, or he may cause the same to be administered by a nurse or interne under his direction and supervision.

(2) **VETERINARIANS.** A veterinarian, in good faith and in the course of his professional practice only, and not for use by a human being, may prescribe, administer, and dispense narcotic drugs, and he may cause them to be administered by an assistant or orderly under his direction and supervision.

(3) **RETURN OF UNUSED DRUGS.** Any person who has obtained from a physician, dentist, or veterinarian any narcotic drug for administration to a patient during the absence of such physician, dentist, or veterinarian, shall return to such physician, dentist, or veterinarian any unused portion of such drug, when it is no longer required by the patient. Sec. 82-1007.

Preparations Exempted

Except as otherwise in this Act specifically pro-

vided, this Act shall not apply to the following cases: Administering, dispensing, or selling at retail of any medicinal preparations that contain in one fluid ounce, or if a solid or semi-solid preparation, in one avoirdupois ounce, not more than one grain or codeine or of any of its salts.

The exemption authorized by this section shall be subject to the following conditions: (1) that the medicinal preparation administered, dispensed, or sold, shall contain, in addition to the narcotic drug in it, some drug or drugs conferring upon it medicinal qualities other than those possessed by the narcotic drug alone; and (2) that such preparation shall be administered, dispensed, and sold in good faith as a medicine, and not for the purpose of evading the provisions of this Act.

Nothing in this section shall be construed to limit the quantity of codeine or of any of its salts that may be prescribed, administered, dispensed, or sold, to any person or for the use of any person or animal, when it is prescribed, administered, dispensed or sold, in compliance with the general provisions of this Act. Nothing in this section shall be construed to prevent possession and sale of paragoric by registered drug stores when record of such sale is kept in the manner and form as now provided by law. Sec. 82-1008.

Record to Be Kept

(1) **PHYSICIANS, DENTISTS, VETERINARIANS, AND OTHER AUTHORIZED PERSONS.** Every physician, dentist, veterinarian, or other person who is authorized to administer or professionally use narcotic drugs, shall keep a record of such drugs received by him, and a record of all such drugs administered, dispensed, or professionally used by him otherwise than by prescription. It shall, however, be deemed a sufficient compliance with this subsection if any such person using small quantities of solutions or other preparation of such drugs for local application, shall keep a record of the quantity, character, and potency of such solution or other preparations purchased or made up by him, and of the dates when purchased or made up, without keeping record of the amount of such solution or other preparation applied by him to individual patients.

Provided. That no record need be kept of narcotic drugs administered, dispensed, or professionally used in the treatment of any one patient, when the amount administered, dispensed, or professionally used for that purpose does not exceed in any forty-eight (48) consecutive hours, (a) four (4) grains of opium, or (b) one-half ($1\frac{1}{2}$) of a grain of morphine or of any of its salts, or (c) two (2) grains of codeine or of any of its salts, or (d) one-

fourth (1/4) of a grain of heroin or of any of its salts, or (e) a quantity of any other narcotic drug or any combination of narcotic drugs that does not exceed in pharmacologic potency any one of the drugs named above in the quantity stated.

(2) **MANUFACTURERS AND WHOLESALERS.** Manufacturers and wholesalers shall keep records of all narcotic drugs compounded, mixed, cultivated, grown, or by any other process produced or prepared, and of all narcotic drugs received and disposed of by them, in accordance with the provisions of subsection 5 of this section.

(3) **APOTHECARIES.** Apothecaries shall keep records of all narcotic drugs received and disposed of by them, in accordance with the provisions of subsection 5 of this section.

(4) **VENDORS OF EXEMPTED PREPARATIONS.** Every person who purchases for resale, or who sells narcotic drug preparations exempted by section 8 of this Act, shall keep a record showing the quantities and kinds thereof received and sold, or disposed of otherwise, in accordance with the provisions of subsection 5 of this section.

(5) **FORM AND PRESERVATION OF RECORDS.** The form of records shall be prescribed by the State Health Officer. The record of narcotic drugs received shall in every case show the date of receipt, the name and address of the person from whom received, and the kind and quantity of drugs received; the kind and quantity of narcotic drugs produced or removed from process of manufacture, and the date of such production or removal from process of manufacture; and the record shall in every case show the proportion of morphine, cocaine, or ecgonine contained in or producible from crude opium or coca leaves received or produced. The record of all narcotic drugs sold, administered, dispensed, or otherwise disposed of, shall show the date of selling, administering, or dispensing, the name and address of the person to whom, or for whose use, or the owner and species of animal for which the drugs were sold, administered or dispensed, and the kind and quantity of drugs. Every such record shall be kept for a period of two (2) years from the date of the transaction recorded. The keeping of a record required by or under the Federal Narcotic Laws, containing substantially the same information as is specified above, shall constitute compliance with this section, except that every such record shall contain a detailed list of narcotic drugs lost, destroyed, or stolen, if any, the kind and quantity of such drugs, and the date of the discovery of such loss, destruction, or theft.

(6) Every person who purchases cannabis for resale should keep a record of its date of receipt,

name and address of the person for whom received, and the proportion of resin contained in or producible from the plant *cannabis sativa* L., received or produced. Sec. 82-1009.

Labels

(1) Whenever a manufacturer sells or dispenses a narcotic drug, and whenever a wholesaler sells or dispenses a narcotic drug in a package prepared by him, he shall securely affix to each package in which that drug is contained a label showing in legible English the name and address of the vendor and the quantity, kind and form of narcotic drug contained therein. No person, except an apothecary for the purpose of filling a prescription under this Act, shall alter, deface, or remove any label so affixed.

(2) Whenever an apothecary sells or dispenses any narcotic drug on a prescription issued by a physician, dentist, or veterinarian he shall affix to the container in which such drug is sold or dispensed, a label showing his own name, address, and registry number, or the name, address, and registry number of the apothecary for whom he is lawfully acting; the name and address of the patient, or, if the patient is an animal, the name and address of the owner of the animal and the species of the animal; the name, address, and registry number of the physician, dentist, or veterinarian, by whom the prescription was written; and such directions as may be stated on the prescription. No person shall alter, deface, or remove any label so affixed. Sec. 82-1010.

Authorized Possession of Narcotic Drugs by Individuals

A person to whom or for whose use any narcotic drug has been prescribed, sold, or dispensed, by a physician, dentist, apothecary, or other person authorized under the provisions of section 5 of this Act; and the owner of any animal for which any such drug has been prescribed, sold, or dispensed, by a veterinarian, may lawfully possess it only in the container in which it was delivered to him by the person selling or dispensing same. Sec. 82-1011.

Persons and Corporations Exempted

The provisions of this Act restricting the possession and having control of narcotic drugs shall not apply to common carriers or to warehousemen, while engaged in lawfully transporting or storing such drugs, or to any employee of the same acting within the scope of his employment; or to public officers or their employees in the performance of their official duties requiring possession or control of narcotic drugs; or to temporary incidental possession by employees or agents of persons lawfully entitled to possession, or by

persons whose possession is for the purpose of aiding public officers in performing their official duties. Sec. 82-1012.

Common Nuisances

Any store, shop, warehouse, dwelling house, building, vehicle, boat, aircraft, or any place whatever, which is resorted to by narcotic drug addicts for the purpose of using narcotic drugs or which is used for the illegal keeping or selling of the same, shall be deemed a common nuisance. No person shall keep or maintain such a common nuisance. Sec. 82-1013.

Forfeiture of Drugs—Disposition

All narcotic drugs, the lawful possession of which is not established or the title to which cannot be ascertained, which have come into the custody of a peace officer, shall be forfeited, and disposed of as follows:

(a) Except as in this section otherwise provided, the court or magistrate having jurisdiction shall order such narcotic drugs forfeited and destroyed. A record of the place where said drugs were seized, of the kinds and quantities of drugs so destroyed, and of the time, place, and manner of destruction, shall be kept, and a return under oath, reporting said destruction shall be made to the court or magistrate and to the United States Commissioner of Narcotics, by the officer who destroys them.

(b) Upon written application by the State Health Officer, the court or magistrate by whom the forfeiture of narcotic drugs has been decreed may order the delivery of any of them, except heroin and its salts and derivatives, to said State Health Officer, for distribution or destruction, as hereinafter provided.

(c) Upon application by any hospital within this State not operated for private gain, the State Health Officer may in his discretion deliver any narcotic drugs that have come into his custody by authority of this section to the applicant for medicinal use. The State Health Officer may from time to time deliver excess stocks of such narcotic drugs to the United States Commissioner of Narcotics, or may destroy the same.

(d) The State Health Officer shall keep a full and complete record of all drugs received and of all drugs disposed of, showing the exact kinds, quantities, and forms of such drugs; the persons from whom received and to whom delivered; by whose authority received, delivered, and destroyed; and the dates of the receipt, disposal, or destruction, which record shall be open to inspection by all Federal or State officers charged with the enforcement of Federal and State narcotic laws. Sec. 82-1014.

Notice of Conviction to Be Sent to Licensing Board

On the conviction of any person of the violation of any provision of this act, a copy of the judgment and sentence, and of the opinion of the court or magistrate, if any opinion be filed, shall be sent by the clerk of the court, or by the magistrate, to the board or officer, if any, by whom the convicted defendant has been licensed or registered to practice his profession or to carry on his business. On the conviction of any such person, the court may, in its discretion, suspend or revoke the license or registration of the convicted defendant to practice his profession or to carry on his business. On the application of any person whose license or registration has been suspended or revoked, and upon proper showing and for good cause, said board or officer may reinstate such license or registration. Sec. 82-1015.

Records to Be Confidential

Prescriptions, orders, and records, required by this Act, and stocks of narcotic drugs, shall be open for inspection only to federal, state, county, and municipal officers, whose duty it is to enforce the laws of this State or of the United States relating to narcotic drugs. No officer having knowledge by virtue of his office of any such prescription, order, or record shall divulge such knowledge, except in connection with a prosecution or proceeding in court or before a licensing or registration board or officer, to which prosecution or proceeding the person to whom such prescription, orders, or records relate is a party. Sec. 82-1016.

Fraud or Deceit to Obtain Drugs

(1) No person shall obtain or attempt to obtain a narcotic drug, or procure or attempt to procure the administration of a narcotic drug, (a) by fraud, deceit, misrepresentation, or subterfuge; or (b) by the forgery or alteration of a prescription or of any written order; or (c) by the concealment of a material fact; or (d) by the use of a false name or the giving of a false address.

(2) Information communicated to a physician in an effort unlawfully to procure a narcotic drug, or unlawfully to procure the administration of any such drug, shall not be deemed a privileged communication.

(3) No person shall willfully make a false statement in any prescription, order, report, or record, required by this Act.

(4) No person shall, for the purpose of obtaining a narcotic drug, falsely assume the title of, or represent himself to be, a manufacturer, wholesaler, apothecary, physician, dentist, veterinarian, or other authorized person.

(5) No person shall make or utter any false or

forged prescription or false or forged written order.

(6) No person shall affix any false or forged label to a package or receptacle containing narcotic drugs.

(7) The provisions of this section shall apply to all transactions relating to narcotic drugs under the provisions of section 8 of this Act, in the same way as they apply to transactions under all other sections. Sec. 82-1017.

Exceptions and Exemptions Not Required to Be Negatived

In any complaint, information, or indictment, and in any action or proceeding brought for the enforcement of any provision of this Act, it shall not be necessary to negative any exception, excuse, proviso, or exemption, contained in this Act, and the burden of proof of any such exception, excuse, proviso, or exemption, shall be upon the defendant. Sec. 82-1018.

Enforcement and Cooperation

It is hereby made the duty of the State Health Officer, his officers, agents, inspectors and representatives, and of all peace officers within the State, and of all county attorneys, to enforce all provisions of this Act, except those specifically delegated, and to cooperate with all agencies charged with the enforcement of the laws of the United States, of this State, and of all other States, relating to narcotic drugs. Sec. 82-1019.

Penalties

Any person violating any provision of this Act shall upon conviction be punished, for the first offense, by a fine not exceeding \$100.00 or by imprisonment in jail for not exceeding six (6) months, or by both such fine and imprisonment, and for any subsequent offense, by a fine not exceeding \$500.00 or by imprisonment in State prison for not exceeding one year or by both such fine and imprisonment. Sec. 82-1020.

Effect of Acquittal or Conviction Under Federal Narcotic Laws

No person shall be prosecuted for a violation of any provision of this Act if such person has been acquitted or convicted under the Federal Narcotic Laws of the same Act or omission which, it is alleged, constitutes a violation of this Act. Sec. 82-1021.

Interpretation

This Act shall be so interpreted and construed as to effectuate its general purpose, to make uniform the laws of those States which enact it. Sec. 82-1022.

Name of Act

This Act may be cited as the Uniform Narcotic Drug Act. Sec. 82-1023.

Use and Possession of Narcotic Drugs by Institutions and Wholesale Druggists

It shall be lawful for eleemosynary institutions, sanatoriums, hospitals and wholesale druggists having registered Pharmacists in their employ; to possess: use: compound: and sell Narcotic drugs in pursuance of the Federal Narcotic Act—Public Law No. 223-63, Congress H.R. 6282; and the rules and regulations thereto appertaining. Sec. 82-1024.

DOCTORS TO REPORT KNIFE AND GUNSHOT WOUNDS

Act No. 258 of 1949. All physicians, surgeons, hospitals, whether public or private, and all druggists or other persons that might be called upon to render first-aid treatment, shall report all cases of knife or gunshot wounds treated by them or received in such hospital, which wounds appear to have been intentionally inflicted, to the office of the sheriff of the county, or to one of his regular commissioned deputies; if within a city of the first class, a report to the Chief of Police or a regular member of the police force shall be equivalent to a report to the sheriff, a proper report to either being compliance with the requirements of this Act.

Such report shall be made immediately upon the nature of the injury being ascertained, shall be by telephone, if possible and practicable, otherwise by writing, and shall contain the name, age, sex, color, and location of the person so injured, together with the names of persons bringing such person in for treatment, if any. Written report under this Act shall not be compliance unless speedier means of transmitting the notice are not available, are impractical, or are incapable of reaching such officer, or one of them.

Any person violating any provision of this Act shall be deemed guilty of misdemeanor, and shall be fined in any amount not less than \$10.00 or more than \$100.00. Secs. 42-501 through 42-503.

HOSPITALIZATION OF THE INDIGENT SICK

Sections 83-201 through 83-208 of the Arkansas Statutes Annotated, as amended by Act 158 of 1951, provides for hospitalization of indigents, including charges that may be made by hospitals and the length of time that patients may receive such care. The duration of hospitalization is limited to not more than 20 days in any one year.

Any person whose income, or that of his family, does not exceed \$30.00 per month may, upon application to the County Welfare Director in the county in which he resides, be certified by the County Welfare Director as being eligible for

benefits under this Act; the State Department of Public Welfare is given the additional right to determine eligibility of other applicants for hospitalization in unusual cases where family income seems totally inadequate to meet family expenses. No hospital providing for the hospital treatment and maintenance of patients under the provisions of these sections shall charge more than the reimbursable cost per day of in-patient service for such treatment and service, and such sum shall include all hospital care in a ward, food and supplies necessary for proper hospitalization; such payment to be made by the State Department will be considered full payment for all services provided, and the hospital will accept no payment from the patient or anyone else for such services, provided that no hospital shall be paid less than \$3.00 per day nor more than the reimbursable cost per day for such services. The method of computing "reimbursable costs per day" shall be fixed by the State Department of Public Welfare.

Pneumothorax Treatments

Act 146 of 1951 provides that patients certified by the superintendent of the two tuberculosis sanatoriums as requiring treatment known as pneumothorax, and when it is wise for such patient to remain at home, may receive pneumothorax treatment at home from a local physician when the County Judge certifies them to be unable to pay for same. However, fees allowed are not to exceed \$3.00 per treatment.

There was appropriated out of the Public Welfare fund for the biennial period ending June 30, 1953, the sum of \$70,000.00 for this treatment.

STATE MEDICAL EXAMINER

The 1951 Legislature passed Act No. 398, which provided for the establishment of the office of State Medical Examiner. This office is to be established under the direction and regulation of a Commission consisting of the Dean of the University of Arkansas School of Medicine, the Director of the Arkansas State Board of Health, and the Director of the Arkansas State Police. The members of the Commission shall serve without compensation and shall select one of its members as chairman and one as vice-chairman, who shall act as chairman in the absence or inability of the chairman.

The Director of the Office of State Medical Examiner shall be the head of the Department of Pathology of the University of Arkansas School of Medicine.

There shall be established under the supervision of the Director a central office and laboratory having adequate facilities for the conduct of

autopsies and of such pathological, bacteriological and toxicological examinations as may be necessary or proper. This office and laboratory, together with necessary furniture, equipment, records and supplies as may be required, shall be provided by the University of Arkansas School of Medicine.

Upon the death of any person from violence, or suddenly when in apparent good health, or when unattended by a physician, or in prison, jail or penal farm, or in any suspicious, unusual or unnatural manner, the coroner or the Director of the Office of State Medical Examiner shall be notified by the physician in attendance by any law enforcement officer having knowledge of such death by the undertaker, the jailer, if the death occurs within a jail or prison, or by any other such person present.

The coroner upon receipt of such a notice shall promptly notify the Director of the Office of State Medical Examiner, and if, in the opinion of the coroner or of the Director, it is advisable and in the public interest that an autopsy be made, or if an autopsy is requested by the proper official or officials, the autopsy shall be performed by the Director of the Office of State Medical Examiner or by such competent pathologist or toxicologist as may be designated by the Director.

In any case of sudden, violent or suspicious death, and where the body is being buried without an autopsy having been performed, the Circuit Judge of the district may order the body to be exhumed and an autopsy performed.

It is unlawful to embalm a dead body when any fact within the knowledge, or brought to the attention of the embalmer is sufficient to arouse suspicion of crime in connection with the cause of death of the deceased until the permission of the coroner or Director of the Office of State Medical Examiner has been first obtained.

The Commission established by Section 1 of this Act is authorized to adopt and promulgate such rules and regulations not inconsistent with law, as it may deem necessary to make effective the provisions of this Act.

SALE OF BARBITURIC ACID COMPOUNDS PROHIBITED

Barbituric acid compounds, under various trade names, are more or less habit-forming and provide an all-too-easy method of becoming a narcotic addict. Patients who have had their discomfort allayed by the legitimate and proper administration of this drug sometimes thereafter attempt to prescribe it for themselves, or their friends, and many near-tragedies and some fatal effects have followed as a result.

Act 184 of 1951 prohibits the sale of barbituric acid and compounds in any manner or under any name including copyrighted and chemical names, except to wholesale drug houses, chemical houses, and dispensing pharmacies or practicing physicians; and same shall not be dispensed except by a practicing physician or retail pharmacy on prescriptions written by a legally qualified practicing physician. Persons legally qualified to practice dentistry or veterinary medicine may prescribe the drug.

An oral prescription to a pharmacist, by telephone or otherwise, for any of the drugs mentioned in this Act must be confirmed to such pharmacist in writing within seventy-two hours by such prescriber, and the failure to do so shall be unlawful.

Record must be kept of the sale of barbituric acid compounds.

State Board of Health and State Board of Pharmacy are hereby authorized to promulgate necessary regulations for the administration and enforcement of this Act.

Violator of the provisions of the Act shall be guilty of a misdemeanor and for such offense shall, upon conviction thereof, be fined Five Hundred (\$500.00) Dollars, or shall be sentenced to not more than one year's imprisonment, or by both fine and imprisonment, in the discretion of the court, and for each subsequent offense and conviction thereof shall be fined not less than Five Hundred (\$500.00) Dollars, nor more than One Thousand (\$1,000.00) Dollars or sentenced to not more than one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

USE OF DEAD BODIES

Dead bodies may be used by the medical profession for the advancement of anatomical inquiry or dissection. Secs. 82-404 through 82-407.

Act 213 of 1949 provides for the disposition of person's body by written instrument after death provided the disposition of said body or parts thereof is made for the purpose of advancement of medical science, or for the replacement of diseased or worn out parts of other humans, or for the rehabilitation of human parts or other organs. Secs. 82-408 through 82-410 sup.

ACTIONS AGAINST DOCTORS FOR MALPRACTICE

All actions of contract or tort for malpractice, error, mistake, or failure to treat or cure, against physicians, surgeons, dentists, hospitals, and sanitariums, shall be commenced within two years after

the cause of action accrues. The date of the accrued of the cause of action shall be the date of the wrongful act complained of, and no other time. Sec. 37-205.

WORKMEN'S COMPENSATION ACT

The latest Workmen's Compensation Act enacted by the Arkansas Legislature became effective December 3, 1948. This Act provides that every employment carried on in this State in which five or more employees are regularly employed by the same employer in the course of business or businesses, with certain exceptions and exemptions, are within the provisions of the law and the Workmen's Compensation Commission has jurisdiction over all accidental injuries or deaths arising out of and in the course of the employment.

Section 2 of the Act defines the various terms and words used throughout the Act.

Remedies and rights granted to employees subject to provisions of Act on account of injury or death are exclusive of all other rights and remedies of such employee.

Employees are entitled to compensation without regard to fault as a cause of injury or death; except in instance where injury or death was caused solely by intoxication of injured employee or by willful intention of injured employee to bring about the injury or death of himself or another.

When subcontractor fails to secure compensation required by this Act, the prime contractor shall be liable for compensation to the employees of the subcontractor.

Section 7 of this Act provides that any employer carrying on any exempted or excepted employment may at any time waive such exemptions or exceptions as to any employee or all employees engaged in such employment. Section 8 sets out the manner in which notice of waiver of exclusion or exemption shall be given.

A method for the assignment of rejected risks is provided for in Section 9.

Compensation to the injured employee shall not be allowed for the first seven days' disability resulting from the injury, excluding the day of injury. If disability extends beyond that period, compensation shall commence with the ninth day of disability. If disability extends for four weeks, compensation shall be allowed beginning the first day of disability, excluding the day of injury. Compensation payable to injured employee for disability shall not exceed 65% of his average weekly wage at time of accident, and shall not be greater than \$25 per week nor less than \$7 per week, and shall be paid for a period not to exceed 450 weeks of disability, and in no case shall exceed \$8,000, in addition to medical and hospital serv-

"DOCTOR at Stover's" *These are only a few of our many*

PANDORA BAGS



★ A smooth leather physician's bag, which has compartments in each lid that folds outward. Bag is 17" long, 6½" wide and 11" high. "H"\$34.00

B-D TRIPLE CHANGE STETHOSCOPE



★ This easy to carry stethoscope provides three types of chest pieces. A metal diaphragm type, a bell type and a bracelet diaphragm type. In suede pouch carrying case "J"\$9.00

METAL AUTO CADUCEUS



★ A detailed caduceus in brilliant copper finish. Set upon a green cross, which has a red reflector background. Available with the letters M.D. or R.N.
 "F-A" R.N.\$2.95
 "F-B" M.D.\$2.50

Wm. T. Stover Co., Inc.

has been proud to serve you the past 11 years, and we extend to you the best wishes for a prosperous New Year. . . . With the approaching Christmas Season we have endeavored to compile in this ad some helpful suggestions. Just what is it that you need? Or what is it you want to give? . . . Let us at Stover's give you the service you deserve.

ZOALITE Z-7



EMDEE PHYSICIAN'S BAGS



★ Complete contents of bag can be seen at a glance. Made of enduring Black, embossed, cowhide leather; full leather lined with adjustable strap to hold bottles firmly in place. Bag is 17" long, 8" wide and 11" high, bottom compartment is 6" deep. "G"\$43.00

★ This lamp telescopes 41 to 61 inches and has a goose neck. The element is a 220-watt nonmetallic, screw type. The form of the lamp eliminates all "hot spots" "K"

If the Gift You Choose is not a Happy Selection, It May Be

of appropriate Gifts for Physicians, Nurses and Students!

DESK THERMOMETER



★ A desk thermometer with clear, transparent plastic dial, backed by polished chrome. Has large, easy to read figures. "C"\$2.25

G. E. INTERVAL TIMER



★ A mechanical interval timer which has a hundred uses of all kinds. Invaluable for use in X-Ray Darkrooms for developing and fixing accurately. Measures all time intervals. "L"\$10.50

TYCOS ANEROID



★ Has non-tarnishing 300mm dial with unbreakable crystal. With new style hook sleeve. Slips easily and compactly into pocket or bag. "D"\$42.50

Bandage Type Cuff—
"D-A"\$39.50

HYFREACATOR



★ A small, compact high frequency unit . . . spark-gap type. It hangs on the office wall ready for instant use. It delivers current for all three types of minor electro-surgery. Desiccation, fulguration and biactive coagulation. "M"\$59.50

WHIPPET MIXER



★ This handy one quart mixer with Heavy-Duty Motor is a pleasure to use. And it is easy to clean or store. "O"\$11.95

LEAD IMPREGNATED GLOVES



★ These Gloves are available in two weights consisting of two and three plies of lightweight chamois leather and lined with choice kidskin . . . length of glove: 12"-13".

2-Ply. "NA"\$23.00
3-Ply. "NB"\$30.00



Wm. Stover Co. INC.

PHYSICIANS & HOSPITALS EQUIPMENT & SUPPLIES
KELEKET X-RAY EQUIPMENT & SUPPLIES



721-723 MAIN STREET LITTLE ROCK, ARKANSAS
d--- Merry Christmas and Happy New Year

ices and supplies provided for in Section 11 of this Act.

Compensation payable to the dependents for the death of an employee shall not exceed 65% of employee's average weekly wage at the time of the accident, and shall not be greater than \$25 per week nor less than \$7 per week (except as provided in Section 15(i)(2)), and shall be paid for a period of not to exceed 450 weeks, and in no case shall exceed \$8,000. The aforementioned payments are in addition to funeral allowance and those benefits which were paid or to which the injured employee was entitled in his lifetime under Sections 11 and 13 of this Act.

Section 11 provides that the employer shall promptly provide for an injured employee such medical, surgical, hospital and nursing services, and medicine, crutches, artificial limbs and other apparatus as may be necessary during the period of six months after the injury, or for such time in excess thereof as the Commission, in its discretion, may require. If employer doesn't provide services or other things mentioned in this section within reasonable time after knowledge of injury, Commission may direct injured employee to obtain such service at expense of employer, and emergency treatment to be at expense of employer. All persons who render services shall submit reasonableness of their charges to Commission for its approval, and when approved, shall be enforceable by Commission in same manner provided for the enforcement of compensation payments.

Commission may order a change of physicians at the expense of the employer when, in its discretion, such change is deemed necessary or desirable. The employer is not liable for any payments provided for in this section (11) in case of contest of liability, where the Commission decides that injury does not come under provisions of Act.

The Commission has interpreted this section as giving the employer the right to designate the person who is to render the services to the employee. This is based on the theory that those who have the liability for compensation and medical services will be interested in placing the injured workman under competent care in order that the period of disability be as short as possible and the man returned to productive work with the least amount of permanent disability.

Injured employees claiming compensation are required to submit to physical examinations and treatment by a qualified physician designated or approved by Commission, as the Commission may from time to time require. Employee is not entitled to compensation for any period that he fails to submit to examination or for treatment or

otherwise obstructs same. With certain exceptions failure of employee to obey the order of the Commission in respect to examination or treatment for a period of one year from the date of suspension of compensation shall bar the right of the claimant to further compensation in respect to the injury.

Section 12 sets out the method of determining employee's average weekly wage.

The money allowance payable to an injured employee for disability (Section 13) are as follows:

(a) **TOTAL DISABILITY.** In case of total disability there shall be paid to the injured employee during the continuance of such total disability sixty-five per centum (65%) of his average weekly wage. Loss of both hands, or both arms, or both legs, or both eyes, or of any two thereof shall, in the absence of clear and convincing proof to the contrary, constitute permanent total disability. In all other cases, permanent total disability shall be determined in accordance with the facts.

(b) **TEMPORARY PARTIAL DISABILITY.** In case of temporary partial disability resulting in the decrease of the injured employee's average weekly wage, there shall be paid to the employee sixty-five per centum (65%) of the difference between the employee's average weekly wage prior to the accident and his wage earning capacity after the injury.

(c) **SCHEDULED PERMANENT INJURIES.** An employee who sustains a permanent injury scheduled in this subsection shall receive, in addition to compensation for the healing period, sixty-five per centum (65%) of his average weekly wage for that period of time set out in the following schedule:

(1) Arm amputated at the elbow, or between the elbow and shoulder, two hundred (200) weeks;

(2) Arm amputated between the elbow and wrist, one hundred fifty (150) weeks;

(3) Leg amputated at the knee, or between the knee and the hip, one hundred seventy-five (175) weeks;

(4) Leg amputated between the knee and the ankle, one hundred twenty-five (125) weeks;

(5) Hand amputated, one hundred fifty (150) weeks;

(6) Thumb amputated, sixty (60) weeks;

(7) First finger amputated, thirty-five (35) weeks;

(8) Second finger amputated, thirty (30) weeks;

(9) Third finger amputated, twenty (20) weeks;

(10) Fourth finger amputated, fifteen (15) weeks;

(11) Foot amputated, one hundred twenty-five (125) weeks;

(12) Great toe amputated, thirty (30) weeks;
(13) Toe other than great toe amputated, ten (10) weeks;

(14) Eye enucleated, in which there was useful vision, one hundred (100) weeks;

(15) Loss of hearing of one ear, forty (40) weeks;

(16) Loss of hearing of both ears, one hundred fifty (150) weeks;

(17) Loss of one testicle, fifty (50) weeks; loss of both testicles, one hundred fifty (150) weeks;

(18) Phalanges: Compensation for amputation of the first phalange shall be one-half of the compensation for the amputation of the entire digit. Compensation for amputation of more than one phalange of a digit shall be the same as for amputation of the entire digit.

(19) Loss of per centum of vision: Compensation for the permanent loss of eighty per centum (80%) or more of the vision of an eye shall be the same as for the loss of an eye. In all cases of permanent loss of vision, the use of corrective lens may be taken into consideration in evaluating the extent of loss of vision;

(20) Two or more digits: Compensation for amputation or loss of use of two or more digits or one or more phalanges of two or more digits of a hand or a foot, may be proportioned to the total loss of use of the hand or the foot occasioned thereby, but shall not exceed the compensation for total loss of a hand or a foot;

(21) Total loss of use: Compensation for permanent total loss of use of a member shall be the same as for amputation of the member;

(22) Partial loss or partial loss of use: Compensation for permanent partial loss or loss of use of a member shall be for the proportionate loss or loss of use of the member.

(d) OTHER CASES: A permanent partial disability not scheduled in subsection (c) hereof shall be apportioned to the body as a whole, which shall have a value of 450 weeks, and there shall be paid compensation to the injured employee for the proportionate loss of use of the body as a whole resulting from the injury.

(e) HERNIA: In all cases of claims for hernia it shall be shown to the satisfaction of the Commission:

(1) That the occurrence of the hernia immediately followed as the result of sudden effort, severe strain, or the application of force directly to the abdominal wall;

(2) That there was severe pain in the hernial region;

(3) That such pain caused the employee to cease work immediately.(:)

(4) That notice of the occurrence was given

to the employer within forty-eight (48) hours thereafter;

(5) That the physical distress following the occurrence of the hernia was such as to require the attendance of a licensed physician within forty-eight (48) hours after such occurrence;(.)

In every case of hernia it shall be the duty of the employer forthwith to provide the necessary and proper medical, surgical and hospital care and attention to effectuate a cure by radical operation of the hernia, not exceeding the sum of two hundred fifty (\$250.00) dollars, and to pay compensation not exceeding a period of twenty-six (26) weeks. In case the employee shall refuse to permit such operation, it shall be the duty of the employer to provide all necessary first aid, medical and hospital care and services, and to supply the proper and necessary truss or other mechanical appliance to enable the employee to resume work, not exceeding two hundred and fifty (\$250.00) dollars, and shall further pay compensation not exceeding the period of thirteen (13) weeks. In case death results within a period of one year, either from the hernia or from the radical operation thereof, compensation shall be paid the dependents as provided in other death cases under this Act. Recurrence of the hernia following radical operation thereof shall be considered a separate hernia and the provisions and limitations regarding the original hernia shall apply.

(f) SECOND INJURY. In cases of permanent disability arising from a subsequent accident, where a permanent disability existed prior thereto:

(1) If an employee receive a permanent injury after having previously sustained another permanent injury in the employ of the same employer, for which he is receiving compensation, compensation for the subsequent injury shall be paid for the healing period and permanent disability by extending the period and not by increasing the weekly amount. When the previous and subsequent injuries received result in permanent total disability, compensation shall be payable for permanent total disability, but the sum total of compensation payable for previous and subsequent injuries shall not exceed 450 weeks or eight thousand (\$8,000.00) dollars.

(2) If an employee has a prior permanent disability not occasioned by an injury resulting while in the employ of the same employer in whose employ he received a subsequent permanent injury, the amount of compensation for the subsequent injury shall be fixed as follows:

i. If the subsequent permanent injury is one that is scheduled under section 13(c), and to the same member, the injured employee shall be paid

compensation for the healing period and for the permanent disability occasioned only by the subsequent injury, but not to exceed the time specified in section 13(c).

ii. If the subsequent injury is one that is not scheduled under section 13(c), the injured employee shall be paid compensation for the healing period and for the degree of disability that would have resulted from the subsequent injury if the previous disability had not existed.

iii. If an employee who had previously incurred permanent partial disability through the total loss of one hand, one arm, one foot, one leg, or one eye, incurs permanent total disability through the total loss of another member, enumerated in this sentence, he shall be paid, in addition to the compensation for permanent partial disability provided in section 13(c), additional compensation during the continuance of such total disability not to exceed sixty-five per centum (65%) of the average weekly wage earned by him at the time of the accident which produced the total permanent disability. In case an employee who has been awarded additional compensation under this subsection subsequently establishes an earning capacity by employment, he shall be paid during the period of such employment, instead of the compensation above provided, sixty-five per centum (65%) of the difference between his average weekly wages at the time of the accident which produced total disability and his wage earning capacity as determined by his actual earnings in such employment. The sum total of compensation payable for all disabilities shall not exceed 450 weeks or eight thousand (\$8,000.00) dollars. Compensation provided in this subsection shall be paid out of a special fund created for such purpose in the following manner: The employer, or, if insured, his carrier, shall pay the sum of five hundred (\$500.00) dollars into such special fund for every case of injury causing death in which there are no persons entitled to compensation. The State Treasurer shall be custodian of this special fund, to be known as Second Injury Fund, and the Commission shall direct the distribution thereof.

(g) **DISFIGUREMENT.** The Commission shall award compensation for serious and permanent facial or head disfigurement in a sum not to exceed two thousand (\$2,000.00) dollars, based solely upon the effect such disfigurement shall have on the future earning capacity of the injured employee in similar employment. No award for disfigurement shall be entered until twelve (12) months after the injury.

(h) **REFUSAL OF EMPLOYEE TO ACCEPT**

EMPLOYMENT. If any injured employee refuses employment suitable to his capacity offered to or procured for him, he shall not be entitled to any compensation during the continuance of such refusal, unless in the opinion of the Commission, such refusal is justifiable.

There are 15 occupational diseases compensated for under the provisions of this Act which are set out in Section 14. The Commission has the power to add to this list subject to appropriate conditions and after public hearings.

With the exception of silicosis and asbestosis compensation for occupational diseases is the same as for accidental injuries.

The employer shall pay the reasonable funeral expenses, not exceeding the sum of \$250, if death results from the injury.

If death does not result within one year from the date of the accident, or within the first three years of the period for compensation payments fixed by the compensation order, a rebuttable presumption shall arise that such death did not result from the injury.

Section 15 sets out the percentages of the average weekly wage of the employees and the order or preference of persons to whom the compensation for death will be paid.

Written notice of the injury or death must be given within 60 days after date of injury or death to the Commission and employer. Such notice shall contain the name and address of the employee and employer, a statement of the time, place, nature and cause of the injury or death, and shall be signed by the person claiming compensation, or by someone in his behalf.

Failure to give such notice shall not bar any claim (1) if the employer had knowledge of the injury or death, (2) if the Commission determines that the employer has not been prejudiced by failure to give such notice, (3) if the Commission excuses such failure on the ground that for some satisfactory reason such notice could not be given. Objection to failure to give notice must be made at or before the first hearing on the claim.

The periods of time within which claims for various benefits must be filed are set out in Section 18.

Section 19 details the method of payment of compensation.

The right to compensation shall not be assignable and shall not be subject to garnishment, attachment, levy, execution, or any other legal process. Money compensation to dependents of a deceased employee shall not constitute assets of the estate of the deceased employee and shall be payable to and for the benefit of the dependents alone.

Compensation due an injured employee or his

dependents shall have the same preference as is now or may hereafter be allowed by law to an employee for unpaid wages.

Section 23 sets out the procedure before the Commission in respect of claims.

Subject to certain conditions as set out in Section 26 the Commission may modify awards.

Section 27 sets out the procedure before the Commission. The hearings are open to the public and shall be stenographically reported.

The Commission may cause depositions of witnesses to be taken in such manner as it may direct.

Each witness who appears in obedience to a subpoena shall be entitled to the same fees as witnesses in a civil action in the Circuit Court.

The Commission has the power to preserve and enforce orders during any proceeding had before it, to issue subpoenas for and administer oaths to and compel the attendance and testimony of witnesses, and require the production of books, papers, documents, and other evidence.

If any person in proceedings before the Commission disobeys or resists any lawful order or process, or misbehave during a hearing, or neglects to produce records after being ordered to do so, the facts may be certified to circuit court contempt.

Every employer shall keep a record in respect to any injury to an employee available for inspection by the Commission.

Sections 42 through 47 sets out the number of members on the Workmen's Compensation Commission, qualifications, salaries, personnel, quorums, powers and duties, and reports to be made.

Compensation order or award of a referee or a single Commissioner shall become final unless appealed within 30 days from receipt of order by petition in writing for a full review by the full Commission. Decision of full Commission may be appealed to Circuit Court within 30 days.

Questions as to whether the injured employee should have a private room? special nurses? referred to specialists for examination? are left to the sound discretion of the attending physician and in the absence of abuse are considered reasonable medical services.

The full Act is set out in Arkansas Statutes 1947 Annotated, Sections 81-1301 through 81-1349, Supplement.

CHIROPRACTIC

A Chiropractic license entitles the holder thereof "to adjust by hand the displaced segments of the vertebrae column and any displaced tissue in any manner related thereto for the purpose of removing any injury, deformity or abnormality of human beings."

The State Board of Chiropractic Examiners has authority to grant reciprocity with States having equally as high literary professional requirements as provided in this State. However, the case of *Lindquist v. State*, 1948, 213 Ark. 903, 213 S. W. (2d) 895, held that the State Board of Chiropractic cannot issue a license without a certificate from the Board of Examiners in the Basic Sciences.

Act No. 247 of 1949 amended Section 72-118 of Ark. Stat. Ann. of the Basic Sciences Act, which section listed the exemptions from said Basic Sciences Act, insofar as it applied to chiropractors, to read as follows: "... and provided further that the provisions of this Act shall not apply to any person who was a resident practitioner of chiropractic on March 22, 1948, and to whom a license to practice chiropractic was issued by the State Board of Chiropractic Examiners prior to said date, and provided further that all chiropractors shall be subject to the same provisions and restrictions as are applicable to physicians and surgeons as set out in the Malpractice Act ..."

(Some of the statutes (Sections 72-401—72-414) pertaining to chiropractics were amended by Act 382 of 1951.)

CHIROPODY

The principal Act pertaining to chiropody is compiled as Sections 72-301 through 72-312, Ark. Stat. Ann. (1947) and Supplements thereto.

For the purpose of this Act, chiropody, which is sometimes called podiatry, means diagnosis, medical, mechanical and surgical treatment of ailments of the human foot.

DENTISTRY

Statutes pertaining to dentistry are compiled as Sections 72-501—533, Ark. Stat. Ann. (1947), and Supplements thereto.

NURSING

Statutes pertaining to nursing are compiled as Sections 72-701—72-725, Ark. Stat. Ann. (1947), and Supplements thereto.

OSTEOPATHY

The State Board of Osteopathic Examiners controls and supervises the licensing of osteopaths in accordance with Sections 72-901—72-910, Ark. Stat. Ann. (1947), and Supplements thereto.

The applicant for a license shall furnish evidence to the Board that he has attended for not less than four years of nine months each session, a college of osteopathy, "recognized" as a reputable school, wherein the curriculum of study shall include: Anatomy, histology, physiology, pathology, bacteriology, gynecology, obstetrics, chemistry, toxicology, symptomatology, surgery, hy-

giene, and dietetics, and diagnosis and theory and practice of osteopathy.

The certificate provided for in this Act does not authorize the holder to prescribe or to use drugs in the practice of osteopathy, or to perform major or operative surgery; however, nothing in the Act shall be construed as to prohibit any legalized osteopath from using drugs and performing surgical operations after having obtained a license from a board of medical examiners authorized to issue such licenses.

An applicant to practice osteopathy is required to pass an examination before the Board with a grade of 75 or better. A fee of \$35.00 is charged applicants, none of which is returnable if the applicant fails, and new fees must be paid to take subsequent examinations.

MEDICAL, NURSING, AND HOSPITAL LIENS

A lien is a hold or claim which one person has upon the property of another as security for some debt or charge; or it may be defined as a charge imposed on specific property by which it is made security for the performance of an act.

Act 130, 1933 (Sections 51-801—51-816, Ark. Stat. Ann.), provides that doctors, nurses and hospitals shall, on compliance with its terms, have a lien "for the value of the services rendered or to be rendered" at the express or implied request of that patient injured through the fault of a third person, on any claim, right of action, or money, to which the patient is entitled because of his injuries."

A physician, nurse or hospital may establish his lien in either of two ways, or both: He may serve on the patient a written notice of claim, to be later described. He must serve a copy of that notice on each person or corporation against whom the patient has a claim arising out of his injuries (1) on the person alleged to be responsible for the injuries, (2) or on the patient's insurer, or on both.

Claimant of a lien must then file in the office of the clerk of the circuit court, in the county in which the services are being rendered, a copy of the notice he has served, verified by affidavit, to the effect that the notice and the required copy thereof have been served. The claimant need not wait until his services have been completed before he serves the notice and copies thereof after his first call, and thus preserve his interest intact. If he serves such notice and copies thereof before the completion of his professional service he must, on the completion of his service, serve a supplementary notice on the parties designated above,

and file a copy of that notice in the office of the circuit clerk.

If a patient has instituted an action to recover damages against the wrongdoer, or against any insurer, the claimant may file with the clerk of the court where the action is pending a notice of the physician's claim of lien, authenticated under oath. If a physician does this he need not serve a notice on the patient, or on the wrongdoer, or insurer, although there is no reason why he should not do so if circumstances so indicate. A suit may have been filed, for instance, against the wrongdoer, and yet the patient may have a claim against his own insurer that is in no way related to the suit. In that case it may be expedient for the physician to file a notice of his lien with the insurer, notwithstanding the fact that he has previously filed a notice with the court.

The notice shall contain these facts: (a) On whose behalf it is filed, and whether he claims as a practitioner, nurse or hospital; (b) The name and address of the person through whose fault the injuries were inflicted, and if a lien is claimed against an insurer, the name and address of that insurer; (c) The name of the patient, his usual address, and his whereabouts when the notice is served, if elsewhere than at his usual address; (d) The time when, place where, and circumstances under which the alleged fault or neglect of the wrongdoer occurred, and the nature of the injury; (e) If the services have been completed, the amount for which his lien is claimed. The notice must be supported by an affidavit of the claimant showing that the facts stated of the affiant's own knowledge are true, and that the facts stated on information and belief, he believes to be true.

If the services have not been completed when the notice is served, and the amount for which a lien is claimed is therefore not stated in the notice, the claimant must, within 60 days after the termination of his service, serve a supplementary notice on each person previously notified, and again file a copy of the notice in the court in which the previous notice was filed, showing the amount claimed under the lien.

The notice need not be in any particular form; it is sufficient if it contains the essentials noted above. It may be served in the following ways:

(a) A notice may be delivered to the person on whom it is to be served, or left at his usual place of business or residence with some person of mature years employed or dwelling there.

(b) A notice may be delivered by registered mail, directed to the last known address of the person to be notified, which may be either within or without the State of Arkansas. At the time of

mailing, someone having personal knowledge of the facts should make an affidavit that the notice required by the "medical, nursing and hospital lien law" has been enclosed in the letter. When the letter is mailed, a return receipt should be requested, which receipt should be retained as evidence.

A lien once established will afford a certain amount of protection to the claimant. Any person through whose fault the patient was injured, and any insurer by whom the patient is insured against injury resulting from accident, who, after receiving notice of a claim of lien, pays to the patient the full amount of the patient's claim, if that physician has not received the amount due, will be liable to the physician who has established a lien on the patient's claim.

If a lien has been established by filing a claim in an action instituted by the patient against the person through whose fault he was injured, or against the patient's insurer, and if the action be decided in favor of the patient, the court will embody in its judgment such an award to the claimant as the evidence warrants.

Suit must be filed within 60 days if his claim be not voluntarily settled. The claimant must within 60 days immediately following the day on which the latest notice or supplementary notice of his claim for lien has been filed in the office of the clerk of the circuit court, institute suit to enforce his lien. Otherwise it becomes void.

Physicians will have to use their best judgment in determining the cases in which they will undertake to perfect liens. Probably a physician will not ordinarily attempt to perfect a lien unless he has grave doubts as to whether or not, without the aid of the lien, he will ultimately receive his fee. The expediency of filing a claim of lien in a case in which the amount involved is small should be carefully considered. If a claim be filed, it will lapse within 60 days after the filing of the last notice in the office of the clerk of the circuit court unless the physician institutes an action to enforce the claim. To institute an action it will be necessary to employ counsel and to pay court charges. When the amount involved is small, therefore, a physician will probably, if he files a claim of lien at all, do so without the expectation of undertaking to enforce it by action at law.

(FORMS)

**Affidavit to Be Attached to Copy of Claim
Filed With Circuit Clerk**

STATE OF ARKANSAS,

_____County.

I, _____, being first duly sworn, depose and say that of my own personal knowledge the within and foregoing instrument

of writing is a full, true and perfect copy of a notice and claim of lien served on the_____day of_____, 195____, on_____ and on_____ and on_____.

(Signed)_____

Subscribed and sworn to before me this_____ day of_____, 195_____.

Notary Public.

Supplementary Notice of Claim of Lien

The undersigned, _____, states that heretofore and on the_____day of_____, 195____, he caused to be served upon_____ and _____ and _____

a notice of claim of lien as a practitioner, by reason of services rendered to_____ (hereinafter referred to as "patient") whose usual address is_____in the city of_____, Arkansas, arising out of an injury suffered by said "patient" on the _____day of_____, 195____, at _____, Arkansas, at which time and place said "patient" was injured under the following circumstances: _____, the nature of said injury being as follows: _____.

Said injuries were inflicted through the fault and negligence of_____, whose address is_____.

Said "patient" was at the time of said injury insured by_____.

This is a supplementary notice of lien (filed under and pursuant to Act No. 130 of the 1933 laws of Arkansas) and the undersigned claimant states that between the_____day of_____, 195____, and the_____day of_____, 195____, he performed services as a practitioner for said "patient" to the reasonable value of \$_____, for which amount he claims and asserts a lien in his favor.

STATE OF ARKANSAS,

_____County.

BE IT REMEMBERED, That on this day before me, a Notary Public, within and for the above named county and state, personally appeared _____, to me well known, and who in my presence executed the within instrument, and then and there stated that the facts stated herein of affiant's own knowledge are true, and that the facts stated on information and belief he believes to be true, and that the reasonable

value of the services so rendered by affiant is the sum of \$.....

WITNESS my hand and official seal on thisday of....., 195....

Notary Public.

Notice of Claim of Lien

To.....
YOU WILL TAKE NOTICE that the undersigned....., whose address is

.....in the city of....., Arkansas, has and asserts a claim of lien as a practitioner, by reason of services rendered, and to be rendered to..... (hereinafter referred to as "patient"), whose usual address isin the city of....., Arkansas, and this notice being served upon him at.....in the city of....., Arkansas; arising out of an injury suffered by said "patient" on the.....day of....., 195..., at....., Arkansas, at which time and place the said "patient" was injured under the following circumstances:The nature of said injury being as follows:.....

Said injuries were inflicted through the fault and negligence of....., whose address is.....

Said "patient" was at the time of said injury insured by.....

The amount for which a lien is claimed by the undersigned is the sum of \$.....(a).

The services rendered and to be rendered under the circumstances set forth above have not been completed, and therefore the amount for which a lien is claimed cannot be stated herein (b).

A lien as above set forth is claimed under and pursuant to the provisions of Act No. 130 of the 1933 laws of the State of Arkansas.

STATE OF ARKANSAS,

.....County.

BE IT REMEMBERED, That on this day before me, a Notary Public, within and for the above named county and state, personally appeared the within named....., to me well known, and who in my presence executed the within instrument, and then and there stated that the facts herein stated of affiant's own knowledge are true, and that the facts stated on information and belief, he believes to be true.

WITNESS my hand and official seal as such

Notary Public on this.....day of....., 195....

Notary Public.

The paragraph followed by an (a) above should be crossed out when the claim is filed before the services have been completed.

If the services have been completed, the amount thereof should be filled in, in paragraph (a), and paragraph followed by (b) should be crossed out.

Prior to the enactment of this law a person injured by another could make a settlement with the wrongdoer, and then refuse to pay either the doctor or the hospital, as neither of them had any lien or "hold" on the proceeds of the settlement or judgment.

CLAIMS AGAINST ESTATES

Section 62-1003, Ark. Stat. Ann. (1947), provides that first class claims shall be funeral expenses, expenses of the last illness, wages of servants, and demands for medicines, medical and surgical attention, nursing, and hospitalization during the last illness.

STATE BOARD OF HEALTH

State Board of Health consists of nine members appointed by Governor, one of which shall be elected from each congressional district, and two members at large. In the event that the congressional districts are increased or decreased, the membership of the board shall be increased or decreased accordingly. Each member of the State Board of Health who is chosen from the congressional districts in the State shall be a graduate of a legally constituted and reputable medical college and of at least seven years experience in the practice of his profession in this State, and shall be of good professional standing. One member of the State Board of Health chosen at large shall be a legally licensed, registered and practicing dentist who shall have had at least seven years experience in the practice of his profession in this State, and the other member at large shall be an experienced and registered pharmacist, who shall have been actively engaged in the drug business for at least seven years preceding his appointment. Each of the appointments shall be made by the Governor from a list of not less than three names presented by the Arkansas Medical Society, the Arkansas Pharmaceutical Association, and the Arkansas State Dental Association as to the member to be appointed from the respective profession.

The office of the Board shall be in Little Rock. Members shall hold office for four years. The

Board shall elect one of the members as President, and with the approval of the Governor, shall also elect a Secretary, who may or may not be a member of the Board. If the Secretary is not a member of the Board he shall be a graduate of a legally constituted and reputable medical college, of at least seven years experience in the practice of his profession in this State, shall be of good professional standing and have all the powers of the members of the Board. This Secretary shall be known as the State Health Officer and shall be the executive officer of the Board and perform such duties as may be required of him by the Board or by this Act. He shall be elected for a term of four years.

The Arkansas State Board of Health shall meet at least once every three months; other meetings upon call of President or a majority of Board.

State Board of Health has supervisory power and control over health of citizens, and has power to promulgate rules and regulations to protect public health.

State Board of Health supervises transportation of dead. Sections 82-101 through 82-111, and Supplements thereto.

State Board of Health may engage suitable persons to render sanitary service, and to make or supervise practical and scientific investigations and examinations requiring expert skill, and to prepare plans and reports relative thereto. Duty of all officers and agents having control, charge or custody of any public structure, work, ground or erection, or any plan, description, outlines, etc., to permit and facilitate the examination and inspection. Section 82-114.

EPIDEMICS.—State Board of Health to take action to prevent spread of epidemic or contagious disease when called to their attention by Governor. Section 82-115.

MENTAL HYGIENE.—By Act 53 of 1947 the State Board of Health is authorized and empowered to create and maintain a Division of Mental Hygiene and establish a mental hygiene program. Sections 82-116 through 82-117.

HYGIENIC LABORATORY.—The State Board of Health shall establish, equip and maintain a hygienic laboratory for making analyses of foods and drugs, for the purpose of enforcing pure food and drug laws, and for making investigations of cases and suspected cases of infections, contagious and communicable diseases. Section 82-118.

The State Board of Health may publish for general distribution such reports and other matter as it may deem adapted to promote the public health interest of the State. Section 82-119.

PENALTY FOR VIOLATION OF ACTS OR

RULES.—Violators of any provisions of this Act, or any of the orders, rules or regulations, shall be deemed guilty of misdemeanor, and upon conviction be punished by fine of not less than \$10.00 nor more than \$100.00, or by imprisonment not exceeding one month, or both. Section 82-121.

RIGHT TO ENTER HOME OR TAKE CHARGE OF CHILDREN.—No agent, representative, or official of the State Health Department shall have right to enter any home over the objection of the owner, or to take charge of any child over the objection of the parents, or of the person standing loco parentis or having custody of said child. Section 82-129.

CEMETERIES AND DISPOSITION OF THE DEAD.—Application for location or extension of boundaries of cemetery must be made to State Board of Health. Cemeteries must be registered with County Judge or mayor, as case may be, and a copy of registration filed with State Board of Health. It is unlawful to bury a dead body outside of registered cemetery. Person in charge of cemetery to keep correct record, on form prescribed by the State Board of Health, and at end of each month complete list of all burials during month shall be forwarded to State Board of Health. Sections 82-401 through 82-403.

WATER AND SEWAGE.—Approval of plans for water and sewage works is required by the State Health Officer. Section 20-302.

BEDDING.—State Board of Health prescribes rules which control sterilization and renovation of bedding material. Sections 82-716 and 82-729.

NUISANCES.—The State Board of Health is required to examine into nuisances or questions affecting the security of life and health in any locality and prepare a report of findings at the request of the Governor. Section 82-112.

FOOD AND DRUGS.—Food and drug legislation are covered in Sections 82-901 through 82-910. Importation and sale of unwholesome meats, fish, vegetables, etc., and adulteration of butter, candy and vinegar, are covered by Sections 82-921 through 82-931, and 82-902. Enrichment of flour is required by Sections 82-934 through 82-941.

MILK.—Municipalities are empowered to regulate the sale of milk. Sections 19-3401 through 19-3402.

DAIRY PRODUCTS.—Division of Dairy Products, created by Act 114 of 1941, is primarily concerned with the four branches of the industry that manufacture dairy products; that is, cheese, butter, evaporated milk and ice cream. The main functions performed consist of sanitary inspection of the plants, licensing of and collecting fees from the manufacturing plants; maintenance of compo-

Fred Hames, Pine Bluff, and James March, Warren, conducted a diagnostic cancer clinic recently at Warren under the auspices of the Bradshaw standards; prevention of fraudulent practices; and the general improvement of the manufactured product from the standpoint of health and palatability. Sections 82-912 through 82-925.

BOTTLED DRINKS.—Inspection of bottled drinks required under Section 82-911.

THE ARKANSAS BUREAU OF VITAL STATISTICS.—In 1913 the State Board of Health was authorized to establish a Bureau of Vital Statistics. This Bureau at present provides a system for the registration of births and deaths, marriages and divorce decrees or dismissals. Sections 82-501 through 82-521, and 82-505 sup. and 82-506 sup. All adoption decrees, annulments of adoptions and revocation orders of adoptions are registered with the Bureau.

COUNTY HEALTH OFFICER

Act No. 186 of 1949 (Sections 82-201—82-225, Ark. Stat. Ann. (1947), and Supplements thereto) abolished the office of county physician and county boards of health and created the county health officer in each county. The county health officer shall perform lawful duties heretofore required of county physicians and such other duties as may be prescribed for him under the rules, regulations and requirements of the Arkansas State Board of Health.

Counties may, by proper order of County Court, establish and maintain a county health department. Two or more counties may, with approval of State Board of Health and by order of county courts of respective counties, establish and maintain a district health department.

Fifteen per cent of qualified electors may petition for county health department, which proposition will be submitted to electors of county at general election. In same manner, 15% of qualified electors of at least two or more adjacent counties may petition for establishment of district health department.

At least one member of both county and district boards of health shall have a degree of Doctor of Medicine from a medical school approved by the Council on Medical Education and Hospitals, or its successor of the American Medical Association.

Section 82-217 sets out the jurisdiction of County and District Health Departments, while

Section 82-218 lists the powers and duties of County and District Boards of Health.

Sections 82-220 and 82-221 detail the powers and duties of county and district health departments and the public health officer, respectively.

This Act also provides the method for the dissolution of County and District Health Departments, enlargement of or withdrawal of a county from a health department, and the establishment of city health departments within cities of 25,000 or more population.

The prosecuting attorney, or city attorney, as the case may be, shall, without fee or reward, advise and give legal assistance to the Public Health Officer, and the County, District or City Boards of Health, and shall bring any action, civil or criminal, when requested to do so by the Health Officer or the various Boards of Health.

COUNTY HOSPITALS

Amendment No. 17 (as amended by Amendment No. 25) to the Arkansas Constitution gave the qualified electors of each county the power and right to authorize the construction, reconstruction, or extension of any County Courthouse, County Jail, or County Hospital, by a majority vote, and to authorize the levy of a tax not to exceed one-half of one per cent on the dollar of the valuation of all properties in such county subject to taxation to defray the costs and expenses.

Amendment No. 32 to the Arkansas Constitution provides that "Whenever in any county where there is located a public hospital owned by such county or by any municipal corporation therein, whether such hospital be operated by such county or municipal corporation or by a benevolent association as the agent or lessee of such county or municipal corporation, one hundred or more electors of such county shall file a petition with the county judge asking that an annual tax on real and personal property in such county be levied for the purpose of maintaining, operating and supporting such hospital and shall specify a rate of taxation not exceeding one mill on the dollar of the assessed value of real and personal property in the county. The question as to whether such tax shall be levied shall be submitted to the qualified electors of such county at a general election."

The petition must be filed at least 30 days prior to the election. A majority vote in favor of the question is necessary to pass the tax.

Section 3 of this Amendment provides that the tax may be raised, reduced, or abolished when

100 or more electors of the county shall file a petition with the county judge asking that such tax be raised, reduced, or abolished, the question being submitted to the qualified electors at a general election. Petition must be filed at least 30 days prior to the election at which it will be submitted to the voters. Tax shall be reduced, raised, or abolished, as the case may be, according to the majority of qualified electors voting on the question at such election. Tax shall not be raised to more than one mill on the dollar.

17-1504, Ark. Stat. Ann. (1947)) provides for board of Governors for County Hospitals.

Board shall consist of 7 members who are qualified electors to be appointed by the County Judge. One member to be elected Chairman.

This Board is charged with the duty of managing, controlling, and supervising the operation of the county hospital. Board is empowered with authority to make regulations, employ personnel and prescribe any and all requirements and other matters pertaining to the operation of the hospital. In addition to other personnel, the Board may hire a business manager.

With the approval of the County Judge and Quorum Court the Board may lease or contract the hospital, except when restricted by county hospitals having been constructed with Federal grant-in-aid derived from P. L. 725.

Act No. 481 of 1949 (Sections 17-1501—

Fred Hames, Pine Bluff, and James March, Warren, conducted a diagnostic cancer clinic recently at Warren under the auspices of the Bradley County Medical Society and the Arkansas Division, American Cancer Society.

PERSONALS AND NEWS ITEMS

"The Management of the Borderline Pelvis," by Willis E. Brown, Little Rock, appears in the November issue of the Southern Medical Journal.

D. W. Goldstein and Art B. Martin, Fort Smith, conducted a diagnostic cancer clinic at Paris November 27th under the auspices of the Logan County Medical Society and the Arkansas Division, American Cancer Society.

The following attended the South Central Section of the American Urological Association at Dallas: Carl L. Wilson, Fort Smith; Frank Clark, El Dorado; A. R. Russell, Pine Bluff; L. D. Reagan, John Roberts, Little Rock; H. King Wade, Jr., Hot Springs National Park, and Gerald H. Teasley, Texarkana.

L. J. Kosminsky, Texarkana, has been appointed advisory member of the National Child Welfare Commission of the American Legion.

The Arkansas Public Health Association recently elected A. C. Curtis, Little Rock, president, and R. E. Smallwood, Fayetteville, member of the executive council.

Dr. and Mrs. Henry G. Hollenberg, Little Rock, recently visited in Hawaii where Dr. Hollenberg attended the sessions of the Pan-Pacific Surgical Association.

The following were registered at the Dallas session of the Southern Medical Association: Hoyt R. Allen, Little Rock; C. A. Archer, Jr., Conway; M. E. Blanton, Jonesboro; W. E. Brown, Little Rock; G. H. Butler, Fayetteville; A. G. Cazort, Little Rock; H. L. Choate, Little Rock; O. H. Clifton, Rector; E. P. Cope, Little Rock; K. W. Cosgrove, Little Rock; C. E. Crawley, Forrest City; R. C. Dickinson, Horatio; J. W. Dorman, Springdale; S. A. Drennen, Stuttgart; C. E. Etheridge, Morrilton; L. T. Evans, Batesville; W. L. Fulton, North Little Rock; Dorothy Goetze, Hot Springs National Park; V. H. Gordon, Little Rock; J. T. Gray, Jonesboro; C. R. Henry, Little Rock; L. M. Henry, Fort Smith; J. B. Hesterly, Prescott; A. F. Hoge, Fort Smith; J. B. Holder, Monticello; J. M. Hundley, Little Rock; L. K. Hundley, Pine Bluff; R. R. Kirkpatrick, Texarkana; W. E. Knight, Fort Smith; G. H. Landers, El Dorado; J. S. Levy, Little Rock; R. M. Logue, Little Rock; R. V. McCray, Malvern; L. H. McDaniel, Tyronza; I. Meschan, Little Rock; B. C. Middleton, Texarkana; R. I. Millard, Russellville; J. H. Miller, Camden; E. A. Mendelsohn, Fort Smith; B. N. Murphy, El Dorado; M. L. Norwood, Lockesburg; W. S. Orr, Little Rock; D. L. Owens, Harrison; W. E. Phipps, Jr., North Little Rock; W. A. Ross, Arkadelphia; R. E. Schirmer, Fort Smith; L. D. Seager, Little Rock; F. E. Shearer, Fort Smith; F. D. Switzer, DeQueen; E. M. Smith, Hot Springs; W. A. Snodgrass, Little Rock; D. B. Stough, Hot Springs; R. T. Smith, Little Rock; V. L. Toombs, Little Rock; H. King Wade, Hot Springs; J. W. Webb, Jonesboro; J. S. Wilkins, Hot Springs; R. H. Whitehead, Jr., DeWitt.

Representing the councilor districts, the following have been elected to the Board of Directors, Arkansas Division, American Cancer Society: Norman K. Smith, Pocahontas; J. J. Monfort, Batesville; S. A. Drennen, Stuttgart; V. H. Mar-

quis, Lake Village; E. E. Estes, Fordyce; H. H. Holt, Nashville; W. F. Barrier, Malvern; Peter O. Thomas, Little Rock; W. E. Jennings, Rogers, and G. R. Siegel, Clarksville.

S. W. Hawkins and L. A. Whittaker, Fort Smith, conducted a diagnostic cancer clinic at Berryville recently under the auspices of the Carroll County Medical Society and the Arkansas Division, American Cancer Society.

A. C. Curtis, Little Rock, recently addressed a joint session of the Rotary and Lions clubs at Arkadelphia on tuberculosis.

R. C. Shanlever, Jonesboro, has been elected vice-president of the Frisco System Medical Association.

Jos. F. Shuffield, Little Rock, and Fred H. Krock, Fort Smith, attended the American College of Surgeons meeting in San Francisco during November.

Fellowship in the American College of Surgeons was conferred on the following at the recent San Francisco session: Max Baldridge, Texarkana; J. H. Hellums, Dumas; J. M. Hundley, Little Rock; P. O. Thomas, Little Rock, and S. B. Thompson, Little Rock.

W. J. Ketz, Batesville, has been elected grand master of the Grand Lodge, Free and Accepted Masons in Arkansas.

The following attended the Oklahoma City Clinical sessions in October: Alfred Hathcock, J. B. Hall, W. J. Butt, Harrison Butler, H. E. Leming, Fayetteville; O. J. T. Johnston, Batesville, and J. D. Ashley, Jr., Newport.

BORN—On November 9th, a son, to Dr. and Mrs. W. J. Stocker, Fayetteville.

Fount Richardson, Fayetteville, has been elected chairman of the section on general practice, Southern Medical Association.

J. D. Riley, State Sanatorium, has been selected as Honorary Arkansan, 1951, in the poll conducted by the Arkansas Democrat. In the same poll Eva F. Dodge was selected Greater Little Rock's Woman of the Year.

A. C. Curtis, Little Rock, has been elected president of the Arkansas Public Health Association. K. W. Cosgrove, Little Rock, and R. E. Smallwood, Fayetteville, were elected to the executive council.

A. A. Blair, Fort Smith, spent a recent vacation in Alabama and Texas.

W. J. Ketz, Batesville, has been elected to receive the 33rd degree by the Supreme Council of Scottish Rite Masons.

G. L. Kimball, DeQueen, has been elected to the honorary Masonic degree of Knight Commander, Court of Honor.

Stewart M. Wilson, Rogers, attended the recent conference on gastroenterology conducted by the American College of Physicians in New Orleans.

Alan G. Cazort, Little Rock, has been appointed a member of the Arkansas State Board of Health.

WOMAN'S AUXILIARY NEWS

The Women's Auxiliary to the Garland County Medical Society met October 15, 1951, at Mrs. Driver Rowland's home.


The president, Mrs. Robert Atkinson, introduced Miss Ella Posey, retired home demonstration agent, and Miss Inez Sitton, the present home demonstration agent, and Mr. Aubrey Gates, Associate Director of the Agricultural Extension Service of the University of Arkansas. Mr. Gates talked on "Rural Health."

Mrs. Rowland and her co-hostesses, Mrs. D. B. Stough, Mrs. G. A. Hebert and Mrs. R. L. Daniels, served a delicious dessert plate to the 38 members and guests.

Mrs. Atkinson welcomed the visitors and associate members from the Army and Navy hospital.

The roll was called and the minutes of the September meeting were read and approved. The treasurer reported a balance of \$214.66.

Mrs. Atkinson thanked the members for their cooperation in the sale of tickets and reported that Mrs. Lena Threadgill won the \$35 worth of merchandise. Mrs. O. H. King was presented a gift for selling the most tickets.



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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

Mrs. O. A. Smith reported that "Today's Health" magazine had been placed in the junior and senior high schools and Langston high school.

Mrs. Jack Wright reported that the Medical Auxiliary radio program entitled "Music With Your Meals" will begin this coming week.

Mrs. Edgar Johnwick reported on a proposed organization of a League of Women Voters in Hot Springs.

Mrs. George Fletcher, Chairman of the Research and Romance of Medicine Committee, gave an account of Dr. Henry Tribault of Scott, Arkansas.

The meeting was then adjourned.

Mrs. C. W. Parkerson,
Garland County Medical Auxiliary.

The Women's Auxiliary to the Garland County Medical Society met at Mrs. Lon Reed's home on November 19, 1951.

The President, Mrs. Robert Atkinson, welcomed our guests, General and Mrs. William Livesay, Mrs. Mary Douglas of the Red Cross and Mrs. Allan B. Ramsey from the Army and Navy Hospital.

General Livesay made a very interesting talk on "Civilian Defense."

Mrs. Reed and her co-hostesses, Mrs. Edgar Johnwick and Mrs. Cecil Parkerson, served refreshments from a beautifully appointed table stressing the Thanksgiving theme.

Mrs. Atkinson called the business meeting to order and the minutes were read and approved. A letter from our State President, Mrs. Martindale, was read. She requested that any suggestions for State officers be sent to the nominating committee. Mrs. King Wade, Sr., urged us to give this matter our consideration. A letter from the Girl Scout Councilor requesting that we send a delegate to their council meetings was also read.

The treasurer reported a balance of \$232.22.

Mrs. Atkinson announced that Mrs. Jerry Long and Mrs. Gus Davison had resigned as they have moved from the city.

It was voted to give \$5 to the Jane Todd Crawford Memorial Fund and \$10 to the Elsa F. Oates Fund. It was reported that our contribution made to the Martha Harding Gann Fund last year was not credited to us until this year. A list of our civic organizations was sent to Mrs. Paul Fulmer,

Chairman of the Earl Chalmers Memorial Fund.

It was discussed how we could best aid nurse recruitment. Mrs. E. K. Clardy offered to take any interested girls on a tour of the hospital.

Mrs. Walter Klugh agreed to be in charge of the Christmas boxes for needy children. Mrs. John Dodson and Mrs. Albert Tribble were asked to assist on this committee.

Mrs. Jack Wright announced that our radio program is on KTHS every Sunday night at 8:45.

Mrs. William Goodrum presented the life of Dr. Joseph Lister.

It was announced that Mrs. George Fletcher's "Collect" has been adopted by the State Medical Auxiliary.

The meeting adjourned.

Mrs. C. W. Parkerson,
Garland County Medical Auxiliary.

The Pulaski County Medical Auxiliary held the first meeting of the year October 17, 1951, at the Y.W.C.A. in Little Rock.

Mrs. Gordon P. Oates, President, presided over the meeting. She named the following chairmen for the year: Program, Mrs. Hoyt Choate; hostesses, Mrs. Mahlon Prickett; membership, Mrs. Harry Hayes; visiting, Mrs. Charles Wickard; medical students' wives, Mrs. Estes Allen; health and education, Mrs. Don Dykstra; entertainment, Mrs. T. J. Raney; student loan fund, Mrs. John Laman; student nurse friend, Mrs. William Fulton; cancer control, Mrs. Paul Fulmer; delegates to the Federation, Mrs. W. A. Lamb and Mrs. W. C. Langston; doctors' day, Mrs. J. R. Warden; and legislation, Mrs. Charles Henry.

Heading the Earle Chambers Memorial Library Fund is Mrs. John Samuel; finance, Mrs. Raymond Cook; memorial, Mrs. C. W. Garrison; bulletin and "Today's Health," Mrs. Harlan Hill; nursing recruitment, Mrs. W. G. Cooper, Jr.; exhibits, Mrs. D. D. Wallace; radio, Mrs. H. W. Sterling; rural health, Mrs. J. B. Crawford; civil defense, Mrs. Drew Agar; constitution and by-laws, Mrs. J. K. Donaldson; and telephone, Mrs. E. L. Wilbur.

Officers serving with Mrs. Oates are: Advisor from Pulaski County Medical Society, Dr. Dan Autry; president-elect, Mrs. Hoyt Choate; 1st vice president, Mrs. T. D. Brown; 2nd vice president, Mrs. Mahlon D. Prickett; recording secretary, Mrs. Ben Means; corresponding secretary, Mrs. Charles Wallis; treasurer, Mrs. Edwin Gray;

publicity secretary, Mrs. Alvin E. Longstreth; historian, Mrs. Fred Harris; parliamentarian, Mrs. Curtis Jones, Sr.

The president of the Woman's Auxiliary to the Arkansas Medical Society, Mrs. James Martin-dale, Hope, was the honored guest speaker at this meeting.

In an effort to make for better fellowship through personal acquaintances, name plates were used during the meeting.

The auxiliary voted to assist in the Community Chest Drive by soliciting members of the Pulaski County Medical Society for contributions.

It was reported that the Auxiliary, through leadership of Mrs. D. D. Wallace, manned a booth at the Arkansas Live Stock Show and distributed 30,000 pieces of literature.

Mrs. J. B. Crawford, chairman, reported that the Auxiliary served as hosts to the State Rural Health Conference, which was held in Little Rock August 9th. There were 618 representatives from all but two counties in the state registered for the meeting.

The next meeting of the Auxiliary will be held on November 21st.

Clarine S. Longstreth,
(Mrs. Alvin E. Longstreth)
Publicity Secretary,
Pulaski County Medical Auxiliary.

The Pope-Yell County Medical Auxiliary met in the home of Mrs. Martin T. Heidgen, Russellville, for the September meeting. Eight members were present to enjoy dinner.

As the Auxiliary project for this month, children's gowns are being made and given to the hospital.

The Pope-Yell County Medical Auxiliary met for the October meeting in the home of Mrs. Roy I. Millard, Russellville. Dinner was enjoyed by nine members and three guests, Mrs. Kent Grace, Russellville, Mrs. Keith Hester and Mrs. G. E. Harris of Danville. Mrs. Hester and Mrs. Harris joined the Auxiliary at this meeting.

Business session was conducted by Mrs. Max Mobley, President.

Mrs. Roy I. Millard, Secretary.

The Women's Auxiliary to the Jefferson County Medical Auxiliary met November 2nd at the home of Mrs. Hunter A. Causey for a luncheon and

business meeting. The home was decorated with arrangements of chrysanthemums and there were pink roses in a low bowl on the luncheon table, where 14 members were served.

They decided to have the annual style show and tea February 9th. This year there will be two complete style shows with the first style show to begin at 2:00 o'clock till 3:00, with tea from 3:00 o'clock till 3:30. The second style show will be from 3:30 until 4:30 o'clock with tea from 4:30 until 5:00. Mrs. John K. Walker is to be our general chairman, with Mrs. Howard Wilkins as co-chairman.

The tea and style show, an annual event sponsored by the Women's Auxiliary, to raise funds to provide care for charity patients at the Davis Hospital, will be given in the ballroom of the Hotel Pines.



Medal of Honor



Major General William F. Dean, of Berkeley, California—Medal of Honor. In the hard early days of the Korean War, when it was Red armor against American rifles, General Dean chose to fight in the most seriously threatened parts of the line with his men. At Taejon, just before his position was overrun, he was last seen hurling hand grenades defiantly at tanks.

General William Dean knew in his heart that it's every man's duty to defend America. You know it, too. The General's job was in Korea and he did it superbly well. Your defense job is here at home. And one of the best ways to do that job is to start right now buying your full share of United States Defense* Bonds. For remember, your Defense Bonds help keep America *strong*, just as soldiers like General Dean keep America safe. And only through America's strength can your nation . . . and your family . . . and you . . . have a life of security.

Defense is your job, too. For the sake of all our servicemen, for your own sake, help make this land so powerful that no American again may have to die in war. Buy United States Defense* Bonds now—for *peace*!

Remember when you're buying bonds for defense, you're also building personal cash savings. Remember, too, if you don't save *regularly*, you generally don't save at all. So sign up in

the Payroll Savings Plan where you work, or the Bond-A-Month Plan where you bank. For your country's security, and your own, buy United States Defense Bonds!

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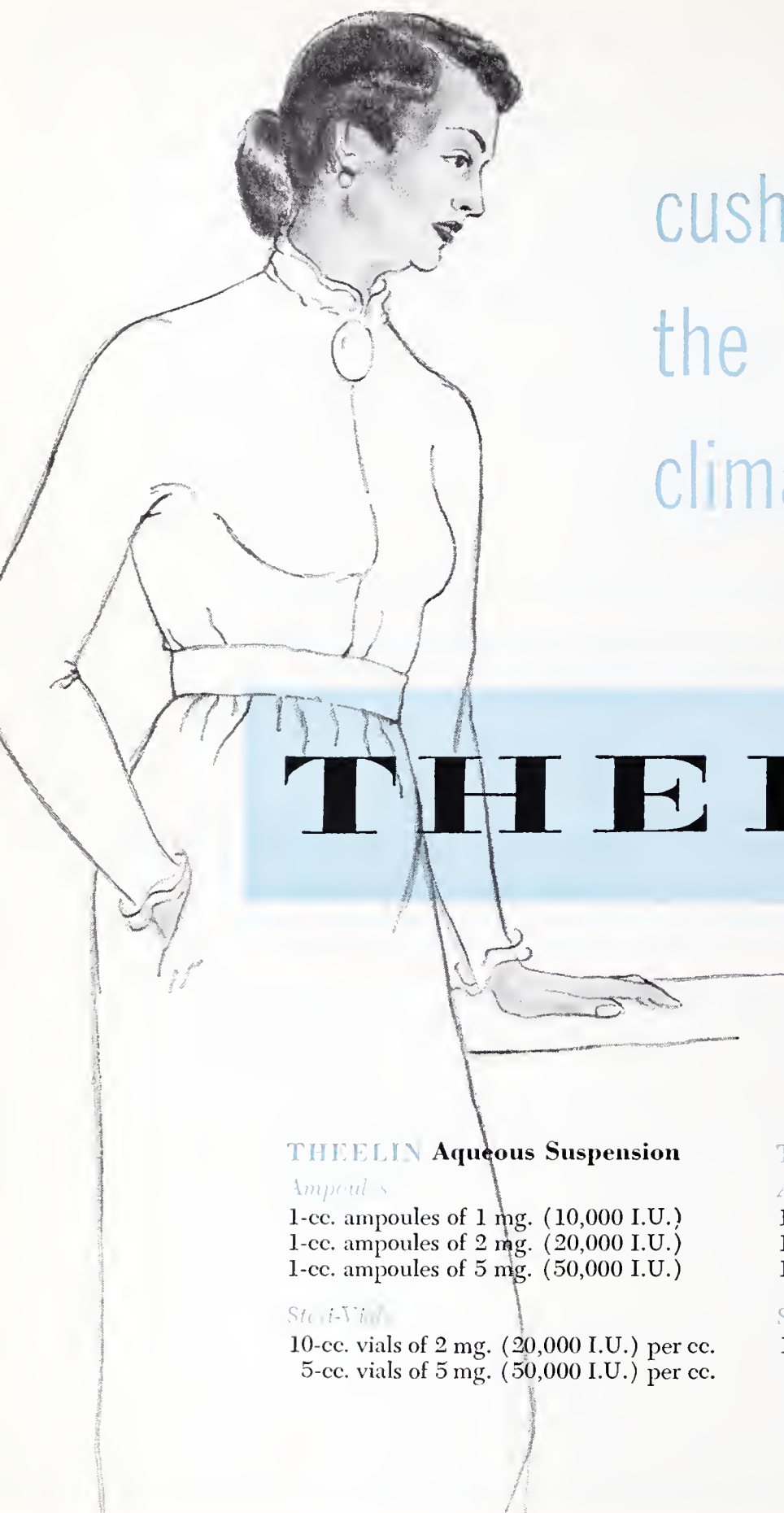
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JAUNDICE*

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Jaundice, or hyperbilirubinemia, is an important subject to both the general practitioner and specialist alike; it always presents an interesting diagnostic problem. To have ways and means of coordinating and simplifying the subject is imperative so that with the diagnostic armamentarium at hand a diagnosis may be readily reached and proper therapy instituted. A thorough knowledge of the pathologic physiology involved results in a more rapid and accurate diagnosis than does the memorized knowledge of the hundred and one conditions which might be associated with this symptom. It is with this in mind that the subject is presented.

Physiology

The fate of a normal red blood corpuscle seems to be the proper approach to the understanding of icterus. It is recalled that the normal erythrocyte eventually terminates its existence by being broken down in the spleen. In this organ the disintegrated red cell is divided into an iron containing part (hemosiderin) and an iron free part (hematoidin). The iron free part is the precursor or mother substance of the main bile pigment called bilirubin. As the iron free part of a broken down red corpuscle is delivered from the spleen to the general circulation it comes in contact with the reticulo-endothelial system which is a specialized network of cells arranged around the vascular system. These cells have the ability of converting the iron free part of the red cell into bilirubin. This bilirubin is attached to a heavy protein molecule, hence it is designated as bilirubin proteinate. It is in this form that it is delivered to the liver. The liver splits the bilirubin proteinate and excretes pure bilirubin via the hepatic duct into the gallbladder. When the gallbladder contracts, bili-

rubin is delivered into the intestinal tract where it is acted upon and broken down by bacteria to its end metabolite known as urobilin (urobilinogen). Some of this urobilin passes out and colors the feces; the remainder is absorbed from the intestinal tract and is carried back to the liver via the portal system. One of the many liver functions is to reconvert the end product urobilin back to its early predecessor bilirubin.

To thoroughly comprehend and clinically classify jaundice, one must understand this physiology and continually keep in mind the difference between bilirubin and urobilin.

Clinical Classification

Many classifications have been presented, each having their respective good points and drawbacks. A classification which has served us well is one which divides jaundice into:

1. Prehepatic
2. Intrahepatic
3. Posthepatic

In this way we can place the lesion as to its location before the liver, in the liver, or after the liver.

Prehepatic Jaundice

In icterus which develops from a prehepatic lesion the pathology may be found in the red blood cell. A typical example of this is familial hemolytic icterus. In this condition the red cells are apparently defective and instead of being the usual normal biconcave disks appear as "golf-ball" red cells. They are also smaller than the normal cell, hence the condition has been referred to as microcytic spherocytosis. These cells have an increased fragility and rupture easily. As a result of this exaggerated bursting process an excessive amount of iron free pigment is excreted by the spleen, resulting in an excessive amount of bilirubin proteinate, which is formed by the reticulo-endothelial system. This results in jaundice due to the hyperbilirubinemia. However, since this bilirubin is in the form of a proteinate and since this molecule is too heavy to pass through the kidney the urine does not show the color that one would expect in the jaundiced patient (acholuric jaundice). Since an increased amount of bilirubin is being delivered to the liver, a greater amount of bilirubin

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is excreted into the intestines; this results in an increased formation of urobilin in the intestinal tract. This large amount of urobilin is not only excreted in the feces, but the remainder is returned to the liver. The liver converts as much of this as it can into bilirubin, but the remainder overflows into the urine, resulting in an increased urobilinuria. Should the Erlich aldehyde test for urobilin be applied to such a urine it would be strongly positive; however, liver function tests would be negative. The van den Bergh test is of some value here, since a prehepatic jaundice gives a positive indirect and negative direct test.

Other examples of prehepatic jaundice are icterus neonatorum and hypersplenism. In the former, too many red blood cells are destroyed and in the latter the spleen is hyperactive.

Intrahepatic Jaundice

In this type the pathology is located in the liver. It must be remembered that the entire liver does not become involved at once; if this were to occur death would promptly ensue. Any toxin be it chemical or bacterial or any organism may so injure the liver that one or more of its important functions might be interfered with. Typical examples would range anywhere from a simple catarrhal jaundice to a fulminating acute yellow atrophy. When the liver is damaged one or more of the liver function tests show signs of hepatic dysfunction. The literature is replete with various liver function tests, and to attempt to utilize many of these is more impractical. Many workers in this field have their favorite test or group of tests; at times we use some of them but for practical purposes we prefer to confine ourselves to the aldehyde test for urobilin, and the cephalin flocculation test of Hanger. If the lesion producing the jaundice is an intrahepatic one, then both of these tests are found positive.

Posthepatic Jaundice

In jaundice caused by posthepatic pathology we assume that the pre- and intrahepatic functions are progressing normally. The most common examples of posthepatic jaundice are: common duct stones, carcinoma of the common and hepatic ducts, carcinoma of the head of the pancreas, and metastases to the porta hepatis.

The obstruction to the flow of bile into the intestinal tract may be partial or complete. If the obstruction is partial then some bilirubin gets into the intestinal tract and this would be converted to urobilin. That urobilin which returns to the liver will be reconverted back to bilirubin since the lesion is not an intrahepatic one,

and the aldehyde test for urobilin will be negative. If, on the other hand, the obstruction to the outflow of bile is complete then no bilirubin gets onto the intestinal tract and no urobilin is formed, therefore, the aldehyde test will again be negative. Liver function tests in posthepatic jaundice reveal normal functioning livers unless the jaundice has been present well over a month and is of a severe degree; a biliary cirrhosis then forms.

Diagnosis

Since diagnosis constitutes the most important part of all medicine, no detail must be overlooked. In evaluating the diagnostic possibilities of each case nothing can replace the recording of a careful and accurate history. A detailed and keen physical examination is equally revealing. It must be recalled too that although most cases of jaundice can be categorized into pre, intra, and posthepatic jaundice, there may still be an overlapping of these lesions. For example: as Watson, Popper and others have emphasized, obstructive jaundice may also be associated with intrahepatic pathology; such cases are assumed to be "cholangiolitic" lesions. By the same token, a true posthepatic obstructive jaundice may be present for a period of three to four weeks or over, and result in liver damage producing a biliary cirrhosis. The true clinician and alert surgeon keep such possibilities constantly in mind. Couvoisier's law is helpful. It states that a large gallbladder in the absence of jaundice usually suggests a cystic duct obstruction (mucocoele of the gallbladder) a small gallbladder plus a jaundice usually indicates a stone in the common duct, and finally a jaundice in the presence of a large gallbladder speaks for a carcinoma of the head of the pancreas. One can also differentiate the various sites of carcinoma which involve the biliary tract. For example: in carcinoma of the gallbladder, jaundice is **not** present but a hard nodular mass which moves with respiration is palpable in the right upper abdominal quadrant; in carcinoma of the common duct, jaundice plus a portal vein complex (ascites, dilated esophageal varices, hemorrhoids, etc.) is present; carcinoma of the ampulla of Vater is suspected when one finds a jaundice plus signs of pancreatic insufficiency; and finally, carcinoma of the head of the pancreas can be diagnosed when jaundice plus an inferior vena cava complex (bilateral dependent edema and dilated veins of both inferior extremities) is noted.

The differentiation between a stone and a carcinoma of the common duct may not be too

difficult, however, it should be remembered that in contradistinction to the usual conception, a carcinoma may produce colic and a stone may be silent. Taking an icterus index on five successive days might clarify the diagnosis. If the lesion is a carcinoma the icterus index is high and continues to rise; however, it is possible for an icterus index to drop if there is some slight ball-valve action in the presence of a stone. Many other ways are available for differentiation and some of these have been discussed.

Unfortunately pruritus (itching) is considered to be a symptom of jaundice; this is erroneous. Pruritus is a symptom of **posthepatic (obstructive) jaundice**. When the patient's primary complaint is his itching then we feel quite positive that the patient is suffering from either a stone or a carcinoma which is involving the extra-hepatic biliary passages. Rarely does a patient with intrahepatic jaundice complain of itching.

The pulse is usually slow in cases of icterus. We prefer a bradycardia in such cases, because when the pulse becomes rapid it usually forebodes an oncoming acute yellow atrophy or hepatic decompensation.

Numerous laboratory tests are at our disposal, but one can surmise that the author has a preference for the Ehrlich aldehyde test for urobilinogen, serum alkaline phosphatase, and the cephalin flocculation test. If the lesion is a pre-hepatic one the urobilinogen test is positive and the liver function tests are negative; if the lesion is posthepatic, both of these tests are negative. No tests are foolproof, however, the statements just made are found to be true in the vast majority of cases. It may be safe to state, however, that when a serum alkaline phosphatase is over 15 Bodansky Units, and when the total cholesterol is above 300 mg., this speaks more often for a surgical type of jaundice than a medical one.

It seems to be a waste of time, effort and money to do a Graham-Cole test on jaundiced patients. The negative response found in these patients is most misleading. On the other hand, a flat X-ray film of the abdomen is always taken. Time nor space does not permit a discussion of the other tests available to the clinician; however, one should always keep in mind that since no test is foolproof diagnostic pitfalls are always present.

Treatment

There has been a tendency to not only classify but to discuss the treatment of jaundice under the headings of medical and surgical jaundice; this seems both impractical and misleading.

When a case of jaundice is seen one never knows whether the condition will eventually end up under a medical or surgical regime, and since both types of therapy overlap, it seems preferable to consider them together. Only the salient parts in the therapy will be mentioned.

Needless to say, preoperative care is a major factor if a case of jaundice is to be brought through a surgical procedure successfully. To mention only a few of the necessary essentials we might include electrolyte, water and protein balance, vitamin therapy, especially K, B, and C, and an adequate glycogen supply to the liver. The severe pruritus which may be associated with jaundice can sap much of the patient's strength and energy. Recently we have used intravenous procaine in a 0.1 per cent concentration and have found that this gives rather rapid and marked relief from itching in most instances. 1000 cc. of this solution are given, never exceeding the rate of 1000 cc. in one hour. A word of caution, however, should be mentioned since the drug is a convulsant, hence, its use in concentrated solutions or rapid injection of dilute solutions may produce irreparable damage. We feel that blood transfusions should not only be utilized as an operative or postoperative measure, but also as a method of supplying many of the previously mentioned needs. Preoperative laboratory tests, such as blood counts, icterus indices, prothrombin, bleeding and coagulating time, blood protein determination, A-G ratio, etc. are all of value. However none of these replace the clinical impression gained by the seasoned diagnostician as he watches his patient through this "build-up" period.

Many operative procedures, both curative or palliative, have been described for the jaundiced patient; the type of lesion determines the type of surgery. I am of the opinion that metastases do not determine operability or inoperability; the only determining factor is fixation of the primary growth and surrounding vital structures. If the primary lesion is not fixed to a vital structure, even in the presence of operable metastases, we feel that Brunschwig's idea in attempting to remove as much of the malignant tissue as is possible is a valid one. Alexander has further stressed this point by suggesting the removal of solitary pulmonary metastases. The monumental work of Whipple in carcinoma of the pancreas has brought those cases which were considered inoperable only a few years ago into the realm of operability.

One cannot discuss the surgical therapy of the common duct, unless he is conversant with the

surgical anatomy of this structure. It is quite simple and practical to consider the common duct as being divided into four parts, each being related to the duodenum. Therefore, the common duct is divided as follows:

Part 1—Supraduodenal Portion

Part 2—Retroduodenal Portion

Part 3—Infraduodenal Portion (Pancreatic)

Part 4—Intraduodenal Portion

Regardless of where the stone is located, only Part 1 is immediately accessible to the surgeon, therefore, the incision is placed here. A stone in either Part 1 or Part 2 is usually easy to remove by means of a supraduodenal choledochostomy. I prefer to drain the common duct rather than close it, because in the presence of edema and infection one never knows when a suture might cut through. A stone located in Part 3 causes no concern if it is not imbedded into the duct wall. If the stone is freely movable it can be dislocated into Part 1 through a supra-choledochal incision. However, if the stone has become firmly fixed in an ulcerated and edematous part of the duct wall it cannot be dislodged. Some surgeons advocate mobilization of the duodenum to remove such a stone. Since this part of the common duct passes through the head of the pancreas and not between the pancreas and duodenum, and since this area is surrounded by a cage of vessels (superior and inferior pancreaticoduodenalis arteries) this maneuver seems impractical and at times is impossible. It is only of value when the stone has eroded through the duct and head of the pancreas; this is unusual. A preferable method to handle such impacted stones in Part 3 is the following: The flat X-ray film which must be in the operating room is examined; it is noted that this is a flat film and no dye has been given. If the stone is not seen on this flat roentgenogram we conclude that it is a cholesterol stone. If such be the case then a catheter, not a "T" tube, is placed from Part 1 of the duct downward to the stone; this is sutured into the common duct. In 24 to 48 hours, a few drops of ether are injected into this catheter every morning and every evening. Since cholesterol is soluble in ether most of these stones will dissolve and disappear without further manipulation. If, on the other hand, the impacted stone in Part 3 is seen on the flat X-ray film, we conclude that it is high in calcium content, and this usually is not affected by the etherization method of treatment. In such an instance a short circuiting operation is done to relieve the jaundice, which after all is of far greater and immediate importance than the pres-

ence of a stone. The procedure which we prefer is a cholecystojejunostomy. This brings up the necessity of determining whether or not the common duct should be explored. Such a decision must be made prior to doing a cholecystectomy, since if the gallbladder is removed and then one finds it necessary to do a short circuiting procedure, it usually is more difficult to do a cholecchojejunostomy rather than a cholecystojejunostomy. The indications for exploring the common duct are too well known to bear repetition here. If an indication is present the common duct is explored, the necessary procedure carried out, and the gallbladder removed if there is no need for its utilization in an anastomotic procedure. A stone in Part 4 is also approached through an incision in Part 1. Occasionally such a stone will dilate the ampulla of Vater and then it can be pushed into the duodenum. If this is impossible, the middle of the descending portion of the duodenum is opened and the stone is extracted transduodenally. The duodenum is then closed.

Drains in the common duct can be removed when one is certain that bile is flowing freely into the duodenum. This can be determined by means of contrast media with the X-ray, tying off the tube, or inspecting the color of the feces. Although common duct tubes have been removed anywhere from a few days to many months postoperatively, I am of the opinion that the average common duct tube should be removed somewhere between a two and four-week period.

There are cases in which it is impossible to determine preoperatively whether the condition is due to a stone or a neoplasm, and whether or not the latter is operable. Although some cases might appear inoperable preoperatively such patients should not be denied at least the chance of an exploratory operation. Occasionally a life can be saved by removing a stone which was thought to be a neoplasm, or by removing a neoplasm which was thought to be non-resectable.

The postoperative management is as vital to a successful result as is the operative procedure itself. This part of the treatment is not relegated to the uninitiated, but is preferably handled by someone thoroughly conversant with the modern approach to this all important phase of therapy.

Summary

1. The proper approach to the subject of jaundice both diagnostically and therapeutically is a thorough understanding of the pathologic physiology of the metabolism of the bile pigments.

(Continued on Page 206)

ERYTHROBLASTOSIS FETALIS (HEMOLYTIC DISEASE OF THE NEWBORN)*†

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Erythroblastosis, or as it is more properly known today, "Hemolytic Disease of the Newborn," is best understood through the historical approach. Actually, there are two main threads to the story, each beginning independently and merging together in the year 1941. These stories have been admirably told by Potter* in her excellent monograph on "Rh".

The first of these historical resumes begins with the Englishman, Ballantyne, who wrote a book in 1892 on "Diseases and Deformities of the Foetus" including "general dropsy of the foetus." Under this heading he describes the typical anemia, the increase in the nucleated red cells in the baby's blood, the placental hypertrophy, and the familial incidence, so well known to us today. In addition he differentiated the disease from syphilis. In 1909 Buchan and Comrie recognized "icterus gravis neonatorum," following observation of each of two families with several infants presenting severe jaundice. In 1912 the German, Rautman, introduced the term "erythroblastosis" because of the known outpouring of immature cells into the blood stream of children with general dropsy, or with icterus gravis. In 1918 Ecklin recognized a third clinical manifestation of the disease, namely anemia. We know, however, today that anemia is rare in a newborn who has never been visibly jaundiced.

In 1932, Diamond, Blackfan and Baty introduced the concept of Erythroblastosis Fetalis as a single disease with various clinical manifestations. They concluded that the fundamental disturbance lay in the hemopoietic system and that differences among "universal edema of the fetus, with erythroblastosis, icterus gravis with erythroblastosis and anemia of the newborn with erythroblastosis," were caused by variations in severity of the inciting agent.

Six years later in 1938, Darrow summarized the known facts which must be accounted for by an

acceptable explanation of the disease, as follows:

1. The apparent absence of any hereditary factor.
2. The birth of healthy children might precede birth of an erythroblastosis child.
3. Frequent familial tendency.
4. The apparent good health of the parents.
5. The apparent absence of significant factors in prenatal history in most cases.
6. The association of edema, grave jaundice and anemia of the newborn.
7. Clinical symptoms.
8. The finding of a large liver and spleen and of the blood changes noted at autopsy.
9. The erythroblastosis.

Purely from deductive reasoning, she concluded that the only possible explanation for all of the above was some form of immune reaction causing destruction of fetal erythrocytes! Truly this was an amazing deduction and quite an interesting prediction in the light of what we know today.

Now, we must turn time back to 1901 and review the second chain of discoveries that ultimately led to the final solution of the etiology of this amazing disease. In that year Landsteiner discovered in human red blood cells two antigens and named them "A" and "B". These antigens, which for point of emphasis we repeat are contained within the erythrocyte, were found to be able to incite antibody response. This discovery formed the basis for blood grouping and made modern blood transfusion possible. Twenty-seven years elapsed before Landsteiner and Levine discovered another system of erythrocytic antigens, and named them "M" and "N". The M and N system of antigens, however, is only weakly antigenic and therefore incite little, if any, antibody response. In 1940 Landsteiner, now working with Wiener, announced the discovery of still another antigen in the red blood cells of the Rhesus monkey, and taking the first two letters, named it "Rh". They also found that the Rh factor was present in 85 per cent of all Caucasian people. Later it was realized that the Rh factor was only one member of an antigenic system known as Rh—Hr, or to carry on the nomenclature originally begun in 1901, the CDE system of antigens. Now, it is known that there are at least three Rh factors. Rh₁ is comparable to C and is found in 70 per cent of the Caucasian people. Rh₀ is comparable to D and is found in 85 per cent of the Caucasians. Rh₁₁ is comparable to E and is found in 30 per cent of Caucasians. Much subsequent work has shown that the Rh factor tends to be present in approximately 100

* Potter, Edith L.

Rh—its relation to congenital hemolytic disease and to intra-group transfusion reactions.
Yearbook Publishers, Inc., Chicago, 1948.

† From the Department of Obstetrics and Gynecology of the Southwestern Medical School of the University of Texas.

per cent of all races other than Caucasian. It has even been suggested that if Rh negative persons are found in any race other than white, one must consider the strong possibility of admixture of Caucasian blood.

The two stories, that of erythroblastosis fetalis, and that of the various antigenic substances found in human red blood cells were brilliantly correlated by Levine, Burnham, Katzin and Vogel in 1941. They discovered that 93 per cent, or 142, of 153 mothers giving birth to erythroblastic children were Rh negative. Also all of the 153 husbands and all of the 153 children were Rh positive. The consistency of data of this discovery was so remarkable that it was almost too good to be true. However, it has subsequently been confirmed.

Hemologic Features

Any consideration of the hemologic features of the Rh factor must include knowledge of the following facts:

1. The antibodies against the Rh factor are never a normal constituent of human blood.
2. They appear only when the Rh factor is injected into an Rh negative person. As a corollary to this it should be stated that since the Rh factor is inseparably bound to the red blood cells this implies that the actual erythrocytes of an Rh positive person must gain access to the blood stream of an Rh negative person.
3. Repeated exposure to Rh positive erythrocytes is necessary to produce immunization. This may come about in two or more ways, but the chief one concerned with hemolytic disease is the leakage of fetal red blood cells across the placental barrier into the maternal circulation. Sufficient leakage to immunize the mother seldom occurs with the first pregnancy. A second method of immunization results from blood transfusion. By this means, an overwhelming inoculation can occur when blood from an Rh positive donor is given to an Rh negative recipient.
4. Individuals vary in their ability to produce antibodies and some never do.
5. An Rh positive father may be either homozygous, always producing Rh positive children, or heterozygous, producing Rh positive children half the time.

CLINICAL FEATURES

Originally this disease was named "Erythroblastosis Fetalis" because of the outpouring of immature red cells into the fetal blood stream in frantic efforts to restore the depleted blood supply. More recently there has been a distinct

tendency to change the name to "Hemolytic Disease of the Newborn." This infers the presence of maternal antibodies specific for the red blood cells of the fetus, and capable of destroying them. Until blocking antibodies were discovered, often these maternal antibodies were only inferred any many times their presence could not be proved. Originally maternal serum and fetal cells were mixed together with the cells suspended in saline. Often times agglutination did not take place and yet the baby had clinical evidence of hemolytic disease. This was not explained until 1945 when Combs, Mourant and Race found that in some instances the antibodies would attach themselves to the fetal red blood cells without agglutinating them. They also discovered that when these so-called "blocking antibodies," which took up most of the antigen were mixed with human globulin that agglutination took place. Practically, if a saline suspension of cells shows no agglutination in water the fluid is removed and replaced by 20 per cent albumin solution. In such an event the blocking antibodies no longer continue to block.

Symptoms and Signs

There are three variants of the disease as we saw from the historical resume. The anemic variety seldom appears by itself, but always is present in all varieties. The occasional child with anemia only, has about a 75 per cent chance of survival, even if nothing is done. About 50 per cent of those who develop severe jaundice survive. On the other hand, children born with generalized edema, as a result of hemolytic disease, do not survive. In addition to these obvious features, there is definite enlargement of the liver and spleen and a marked increase in the number of immature red cells in the circulation. In the normal newborn we may expect to find 5 to 10 erythroblasts or normoblasts among 100 red blood cells. In hemolytic disease of the newborn this number is materially increased. Pathologically one finds the presence of extramedullary areas of erythropoiesis in various organs and tissues.

Obstetric Implications

From the clinical standpoint it is obvious that an Rh positive man must marry an Rh negative woman in order to produce the proper association for erythroblastosis. Even so, the first born is almost never effected for the obvious reason that, during the first pregnancy, too few fetal red blood cells leak into the maternal circulation to produce antibody response sufficient to harm the child. Moreover, the Rh positive husband may be heterozygous, the resulting child

in utero Rh negative, and no isoimmunization whatsoever occurs during the first pregnancy. On the other hand, if the Rh negative mother previously received a transfusion of Rh positive blood by inadvertence, she almost certainly developed a strong antibody response. In such tragic situations, there is little likelihood of a normal, living child being born to union with an Rh positive man, unless he is heterozygous.

A fact worthy of consideration is that **maternal immunization is permanent once established.** Translating this into clinical terms it means that after one baby with hemolytic disease is born, the mother may expect each subsequent baby to have hemolytic disease of increased severity, unless her husband is heterozygous. If a patient loses a child because of hemolytic disease and examination of the husband's serum shows him to be homozygous the only hope this woman can have for successful future pregnancies is to be inseminated with semen from an Rh negative man.

When a definite antibody response has been elicited in an Rh negative woman, either by repeated pregnancies or transfusion, it becomes important to know whether or not the Rh positive husband is homo or hetero-zygous. In the former event he carries genes for the Rh factor in both members of the pair of chromosomes and will produce entirely Rh positive children. If he is heterozygous, there is a chance half of the time that the product of conception may be Rh negative.

Another clinical feature being considered today is the theoretical possibility that quantities of fetal blood may be injected into the maternal circulation by manual placental removal at delivery or at curettage following incomplete abortion. In other words, instrumentation affecting the term, or the immature placenta should be withheld insofar as possible in Rh negative women.

It should be pointed out that immunization seldom becomes so severe during the first half of pregnancy as to destroy the child. This statement holds for the tenth, as well as for the first pregnancy. Therefore, spontaneous interruption of pregnancy during the first semester seldom, if ever, occurs as a result of isoimmunization against the Rh factor.

Prevention

There are two possibilities for prophylaxis: The prevention of immunization, and the prevention of hemolytic disease after immunization has occurred. In prevention of immunization, the factor so important it transcends all else, is avoidance of transfusing an Rh negative woman whose

obstetric career is ahead of her, with Rh positive blood. We should also be cautious about curettage for incomplete abortion in an Rh negative woman and equally, should avoid forceable removal of the placenta following term birth.

Theoretically possible, efforts at prevention of hemolytic disease after immunization is known to have occurred, have been unsuccessful to date. Haptenes have been given to the mother in vain attempts to use up all of her antibodies by combination with them. Other endeavors have been equally unsuccessful.

Prognosis

In 1950 Diamond and his co-workers, Vaughn and Allen, reported 12 years' experience with 539 cases of hemolytic disease of the newborn at the Boston Lying-in Hospital. From the practical standpoint, they found that no baby will be affected where the proper setup is in full force until the mother is sensitized, that is until she has had one or two children. Even so, if the husband is heterozygous there is a fifty-fifty chance after she has been sensitized that the baby will not be affected.

The outlook for the recovery of the first Rh positive child, AFTER sensitivity has been established is good. Stillbirth is rare and about 30 per cent of these children, born after known immunization has occurred, show no evidence of clinical disease at birth. The likelihood of recovery of an erythroblastotic infant is inversely related to the degree of anemia and to liver and splenic enlargement. These workers also found, after discovery of the blocking antibodies, that babies developing kernicterus generally are those born of mothers with high titers. In other words, if the antibody titer is low during pregnancy there is less likelihood that the child will develop kernicterus. Finally kernicterus is more common among prematurely born children than in those born at term.

Management of Pregnancy

Every pregnant woman should have an Rh determination. If she is negative her husband should be examined. If he is positive then she should have antibody titers run from about the middle of pregnancy onward. If the antibody titer increases there is virtually nothing that can be done but certainly we have learned through bitter experience that induction of labor vaginally or by cesarean section before the 38th gestational week does the child no good and in fact favors development of kernicterus. To put this in a different type of statement, one may say that nothing is gained by the early termination of pregnancy and much may be lost. Finally

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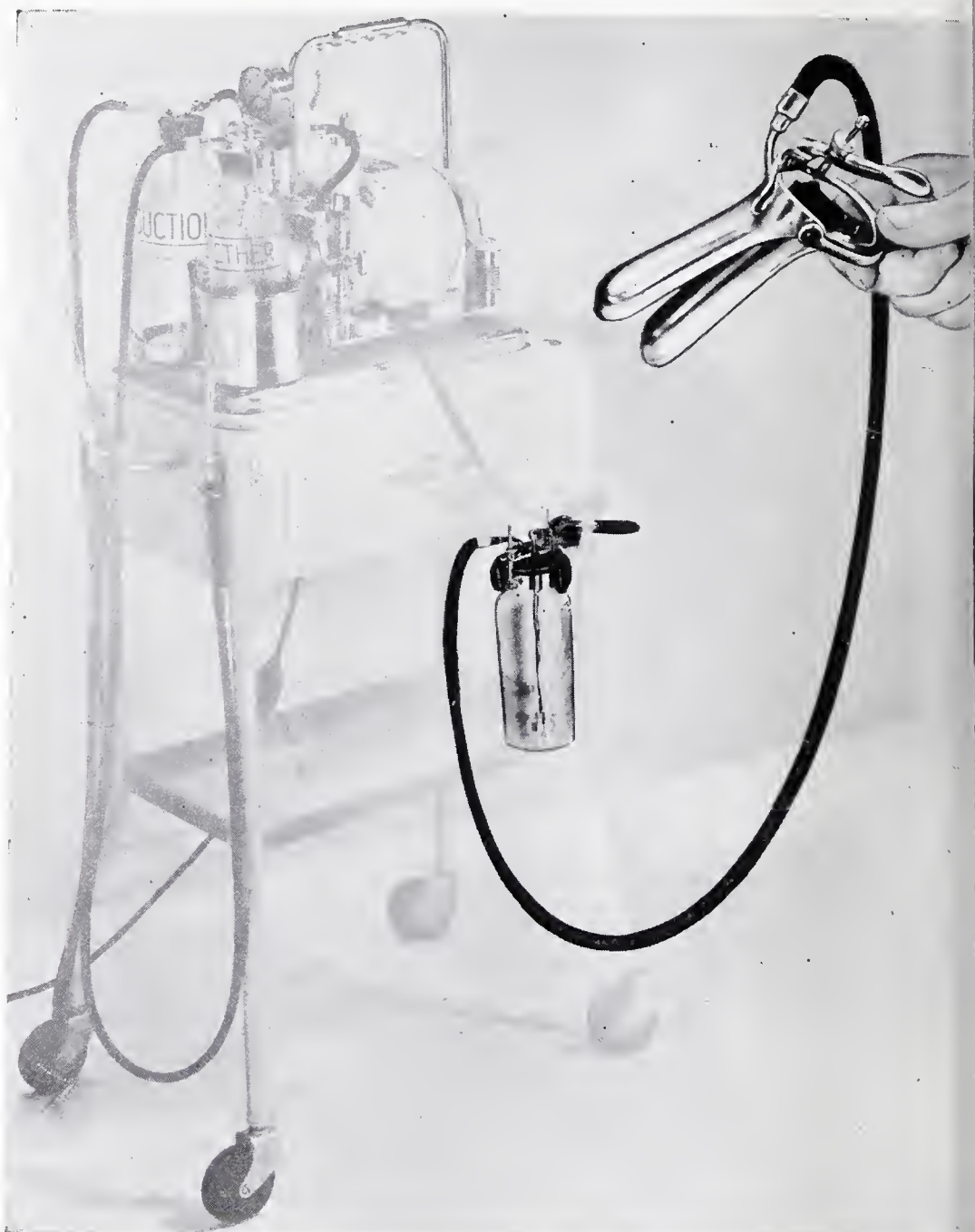
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since the antibodies are contained in the mother's blood serum, they diffuse readily into the breast milk. A mildly erythroblastotic but surviving child should not nurse at his mother's breast but should be artificially fed.

Management of the Child

Above all, the child with hemolytic disease born alive must be transfused. All of these children are anemic and need blood. Obviously blood given to them must contain no specific Rh antibodies. There is some evidence to indicate that blood from a female donor is preferable to that from a male. Female Rh negative blood of course should be taken from a donor with no previous opportunity for sensitization.

More recently bold attempts to remove most of the child's blood and replace it, the so-called "exchange transfusion" in which approximately 90 per cent of the baby's blood is replaced if 500 cubic centimeters of donor blood are used, have seemed to offer some help. The opinions expressed by various authors are conflicting, but the accumulated evidence seems to suggest that exchange transfusion with blood from a female donor is of some benefit in the salvage of life, and definitely is of benefit in the prevention of kernicterus.

SUMMARY OF OBSTETRIC MANAGEMENT

1. In every pregnant woman
 - a. Determine the Rh status
 - b. Inquire regarding previous transfusion
2. If Rh negative, type the husband
3. If he is Rh positive
 - a. Determine antibody titers monthly, beginning at mid pregnancy, later more frequently. Be sure the Coombs test (albumin solution) for blocking antibodies is used.
4. In event of rising titer
 - a. Do not interrupt pregnancy before the 38th week
 - b. Be prepared with apparatus, appropriate blood and a skilled operator for exchange transfusion at birth
5. With a surviving child
 - a. Examine a blood smear for immature forms
 - b. Determine Rh status of the child
6. If the child succumbs
 - a. Perform autopsy, looking especially for hepatosplenomegaly
 - b. Examine a blood smear
 - c. Determine the Rh status of the child

REPORT ON THE THIRD NATIONAL CONFERENCE ON PHYSICIANS AND SCHOOLS

H. W. THOMAS, M. D.

Dermott, Ark.

The Third National Conference on Physicians and Schools was held at Highland Park, Illinois, November 6, 7 and 8, 1951. Just what is this Conference? It is a meeting sponsored by the American Medical Association with the following stated purposes:

1. To evaluate progress made in the development of school health services since the 1949 Conference on Physicians and Schools.
2. To promulgate policies that will promote the kind of health services that will serve the best interest of growing children.
3. To discover methods of working together at state and local levels so that joint action by the **public health, educational and medical professions** will lead to the development of effective health services for school children.
4. To explore both old and new technics for the administration of school health services and to evaluate their effectiveness in view of the recognized responsibility of each family for the health of its children.

The Conference was attended by (1) representatives of various public health agencies, national, state and local; (2) educators from various national, state and local educational associations and (3) representatives of various state medical associations. A total of 180 participants were present.

Attending from Arkansas were Dr. Frances Rothert from the State Health Department, Mr. Dean Whiteside from the State Department of Education, Dr. James Ramsey, Superintendent of Schools in Fort Smith, and myself, representing the Arkansas Medical Society. Twenty-six Medical Societies were represented. Forty-nine public health departments and forty-three departments of education were represented. Thirty-six states and Hawaii participated. Delegates were also present from Japan, Hawaii and Israel.

The Conference was divided into five groups, all working simultaneously on their respective subjects with the work of the different groups being correlated at general sessions. These groups were as follows:

Group I—Health Appraisal of School Children.

Group II—Emergency Service for Accidents and Sudden Illnesses.

Group III—Health Services in Physical Education, Including Athletics.

Group IV—Follow-up to Meet Child Health Needs.

Group V—New Concepts in Control of Communicable Disease.

After consultation with the President of the Arkansas Medical Society prior to leaving for the Conference, it was felt that Group I (Health Appraisal of School Children) would deal with problems more directly related to the medical profession in Arkansas as related to school health programs in this state. Accordingly, I participated in the working sessions of this Group. However, the conclusions of each of the Five Groups were considered by the entire Conference in general sessions and amended, approved or disapproved before being adopted by the Conference. These will be edited and published in booklet form as were the reports of the two previous Conferences. Since this is the case, I do not consider it desirable to attempt to enumerate any of these conclusions here as they are rather lengthy and will be available in convenient booklet form.

The following personal observations are noted, however:

1. Almost without exception the educators—representatives of various education departments—were quite insistent that school health programs be so planned and implemented as to strengthen the patient-doctor relationship or, in other words, to coordinate the program with the private practice of medicine. They seemed to be sold on the idea that the primary responsibility for child health rests with the parent and did not advocate trying to develop a paternalistic or socialistic attitude. This was a gratifying observation to me.
2. Several states, including Tennessee, Indiana, Illinois, and Montana are now conducting State School Health Conferences. I feel that eventually this might be a worthwhile effort on the part of the Arkansas Medical Society, but for the immediate future, I feel that inclusion of the subject of School Health Services in the program of our annual meeting should be considered, possibly with representatives of the Education and Public Health Agencies participating.
3. Inasmuch as School Health Programs seem destined to assume an increasing magnitude and importance in the future, I feel that it behooves the Arkansas Medical Society to actively participate in the development of a

program that will be an extension of the Free-Enterprise, private practice of medicine, rather than another "socialized foot in the door." In other words, at the present time both the Public Health and Education Agencies seem anxious to develop a program along lines which coincide with our stated objectives in preserving the private practice of medicine. Let's do all in our power to see that the School Health Program developed in Arkansas is of this type!

The Clinical Conference which has been established by the Chicago Medical Society for presentation each spring offers lectures on many aspects of medicine to keep doctors abreast of the new things being developed from year to year. Each year the Society presents something of special interest to those attending. It will be held March 4, 5, 6, 7, 1952, in the Palmer House, Chicago.

The year 1952 will show in response to popular demand, an increased number of demonstrations or work shop periods in addition to the regular series of lectures. These demonstrations include presentation of patients, carefully selected scientific movies, and other features interesting from an educational standpoint. The lectures are on subjects of interest to both the general practitioner and the specialist and will be one-half hour in duration. The faculty, which is now being assembled, will represent outstanding teachers of the medical world.

The scientific and technical exhibits are being selected with great care. The scientific exhibits will present visually some of the most recent advances in medicine. The technical exhibits are both helpful and time-saving and worthy of real study. To those who have attended previous clinical conferences, the wealth of material is well-known.

For newcomers, to this activity of a great medical center, it will be an opportunity to renew old acquaintances as well as improving one's medical outlook. The Chicago Medical Society Clinical Conference should be marked on every physician's calendar right now. The completed program will be available shortly and will be printed in our Bulletin or mailed upon request. This meeting has earned the reputation of being one of the most outstanding medical conferences in the country.

ANTABUSE IN THE TREATMENT OF ALCOHOLISM

JAMES A. WALLACE, M. D.
Wallace Sanatorium, Memphis

In 1948 Hald, Jacobsen, and Larsen (1), a group of Danish physicians, reported their use of tetraethylthiuram disulfide (antabuse) in the treatment of alcoholism. Research on the various aspects of this treatment has been done at psychiatric hospitals throughout the United States. The findings of several of these investigators indicate that certain complications may result from the use of antabuse. Bennett et al. (2) and Martensen-Larsen (3) described psychotic reactions in patients treated with the drug. Macklin et al. (4) reported definite changes in the electrocardiogram during the antabuse-alcohol test reaction. Jones (5) and Steckler (6) each reported a death from the antabuse treatment. An editorial in the *Journal of the American Medical Association* (7) in 1950 stated: "It is apparent that treatment of alcoholism with antabuse is far from being free from danger. It should be carried out only in the hospital with small doses of both the drug and alcohol and with all the facilities at hand for emergency resuscitation. The patient should be carefully observed for a number of hours after the acute reaction."

The author has treated a total of thirty-two alcoholics with antabuse at a private psychiatric hospital during the past fifteen months. Only voluntary patients were given the treatment. Thorough physical, psychiatric, and laboratory examinations were done on each patient prior to treatment. The patient had to abstain from all alcoholic beverages at least seven days before he was given the antabuse tablets. The following dosage schedule as recommended by Glud (8) was used:

1st day	2	grams
2nd day	1.5	grams
3rd day	1	gram
4th to 8th days	0.75	gram daily

On the fourth and eighth days the patient is given a test reaction with alcohol. 10 to 15 cc. of whiskey (or the equivalent of other alcoholic beverages) is administered every fifteen minutes until a total of 30 to 40 cc. has been given. Careful check was made of blood pressure and pulse at frequent intervals.

In this series of cases the most frequent findings during the antabuse-alcohol test reaction were a marked flushing of the face, injection of the sclerae, and a feeling of warmth. Later there was marked increase in the pulse

rate and fall in blood pressure. Many of the patients reported dyspnea and they appeared to be having a typical asthmatic attack. Vomiting usually does not occur unless large amounts of whiskey are given. It is important that emergency measures be at hand in case of untoward reactions. Oxygen, glucose, ephedrine sulphate and ascorbic acid have been used in cases in which there is very marked drop in blood pressure. The antabuse-alcohol reaction has been attributed to the increased production of acetaldehyde.

After the test treatments, the patient is put on a maintenance dose of antabuse which varies from 0.125 gram to 0.5 gram daily depending on the reaction to the drug. Most of these patients reported a feeling of fatigue which usually disappears after two to four weeks. Other less frequent side effects reported were headache and vertigo and gastro-intestinal symptoms. Five of the thirty-two patients in this series have been taking antabuse daily for over twelve months and have reported no unusual symptoms. Apparently the drug exerts a definite sedative effect. The majority of patients when started on the drug noticed a marked improvement in their sleeping and reported that they felt less tense.

The majority of the patients in this group have received definite benefits from antabuse when used as an adjunct to psychotherapy. Antabuse is not a "cure" for alcoholism as has been stated in the lay press. The drug does, however, play an important role in the psychiatric treatment of alcoholism. While no unusual reactions were observed in this group of patients, a review of the literature reveals that certain complications may occur. Careful psychiatric evaluation should be made prior to treatment. Antabuse may produce a toxic type of psychosis in some patients. When antabuse is given to the schizoid individual he is suddenly deprived of the crutch which alcohol has provided and may go into a frank psychotic episode. The constitutional psychopath is a poor candidate for this type of treatment because of his lack of insight and lack of ability to help himself.

Results from the use of antabuse in this group of patients have been much better than results from the use of the conditioned reflex method (9) in another group of patients.

It is of paramount importance that each patient before being treated with antabuse is given thorough physical, psychiatric, and laboratory examinations. After being given the antabuse-alcohol test reactions, the patient should

be seen at frequent intervals for psychotherapy.

This treatment is of definite value for that small group of alcoholics who sincerely want help and what is more important are willing to help themselves.

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RESOLUTION

WHEREAS, We are saddened immeasurably by the passing of Dr. Roscoe Conklin Kory: "GOD, the Great Physician sends His messengers on earth—men of wisdom and of knowledge, of counsel and of understanding to bring joy unto HIS children."

WHEREAS, as a specialist in the field of diseases of the eye, ear, nose and throat and in the very hey-day of his life surrounded by loved ones and friends, the ANGEL of Death suddenly kissed his brow into silence and ended a long, colorful and successful career. By heredity he was endowed with a fine mind. He sought all the knowledge available to his profession. He read avidly and drank deeply from the fountains of learning. With him the law of life was the law of mental growth, and he grew wiser with the passing of the years. He was the very essence of integrity and honesty, and those who came to him knew that he was genuine and upright, and that which issued from the mouth was motivated by clean hands, a pure heart, and a life that was scrupulously honorable. He served freely many unfortunate, underprivileged people.

To his family he has bequeathed a glorious heritage and to repeat these words which describe the departure from earth of your dearly beloved:

"So live that when thy summons comes to join
The innumerable caravan, that moves
To the mysterious realm, where each shall take
His chamber in the silent halls of death
Thou go not, like the quarry slave at night,
Scourged to his dungeon, but sustained and
soothed

By an unfaltering trust, approach thy grave,
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."

THEREFORE BE IT RESOLVED, that the Pulaski County Medical Society express to his family this token of the esteem in which he was held by the members of the society and express its heartfelt sympathy to the family the untimely loss which the society has sustained.

BE IT FURTHER RESOLVED, that a copy of this resolution be made a matter of record in the minutes of this meeting; that a copy be sent to the family and a copy to the ARKANSAS MEDICAL SOCIETY. This resolution is respectfully submitted to the members of the Pulaski County Medical Society by your Committee.

R. M. Blakely, M. D.,
A. W. Strauss, M. D.,
I. J. Spitzberg, M. D.

BOOK REVIEW

Surgical Practice of the Lahey Clinic: By Members of the Staff of Lahey Clinic, Boston. 1014 pages, 784 illustrations on 509 figures. Philadelphia and London: W. B. Saunders Company, 1951. Price \$15.00.

This book is the second edition of a similar one published just ten years ago. It presents in a straightforward manner the present-day procedures used at this outstanding clinic.

There are 963 pages and 509 excellent drawings, figures and diagrams.

A statistical review of long time follow-up is given in many instances. A very excellent section is devoted to preparation of the patient with primary hyperthyroidism for surgery with the latest anti-thyroid drugs. The surgical treatment is covered most comprehensively.

While the entire text is devoted primarily to general surgery there are excellent sections on bone and joint surgery, neuro-surgery and anesthesia.

Clinical and Roentgenologic Evaluation of the Pelvis in Obstetrics: By Howard G. Moloy, M.D., M.Sc., Assistant Clinical Professor of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University and The Sloane Hospital for Women. 119 pages, 68 figures. Philadelphia and London: W. B. Saunders Company, 1951. Price \$2.50.

This, the first in a series of monographs by the publisher, is a compact, well-written booklet discussing pelvimetry, pelvis types and their evaluation and presenting a correlation of physical with roentgenray findings in a most practical manner.

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EDITORIAL

PHYSICIAN-PATIENT RELATIONSHIP

In the past few years, one of the most important public relations accomplishments of the medical profession has been the establishment of grievance committees. Physicians have come to realize that patients must have an outlet for their just complaints, and that the profession must take the lead in ferreting out doctors who refuse to abide by the Code of Ethics.

Grievance committees have done another thing for the profession. In community after community they have provided a listening post for public relations problems. When complaints over a period of time are tabulated, it is pos-

sible to determine trends and to seek ways to prevent recurrence of such grievances. Soon after the committees began functioning, it became apparent that the vast majority of patients' grievances against their doctors stemmed from one thing—misunderstanding. Time and time again patients had gone to a medical society grievance committee complaining of overcharging, only to find that a heart to heart talk with their physician would have settled the matter to their satisfaction. Often the patient complained about the medical care he had received only because he did not understand the services rendered.

It has become obvious that the public relations problem of misunderstanding can be solved only in the doctor's office. Patients must be encouraged to talk over with their doctor any questions they might have regarding his services or his fees.

This encouragement can be given with a simple public relations aid which the American Medical Association is making available as a service to its members. It is an attractive office plaque which reads:

To All My Patients . . .

I invite you to discuss frankly with me any questions regarding my services or my fees. The best medical service is based on a friendly mutual understanding between doctor and patient.

The new plaque, illustrated and described on advertising page 47, can increase understanding for every practicing physician. Given a prominent place on physicians' desks or waiting room walls, it will show that America's doctors are sincerely interested in providing the best of medical service, the kind of service that comes only from friendly, mutual understanding.

FEDERAL INCOME TAX

The Revenue Act of 1951 increases the average individual taxpayer's Federal income tax liability, adds some tax relief provisions and imposes a number of new regulations. New surtax tables have been provided for the calendar year 1951. This increase is computed by adding to the tax under the former law approximately 11¾ per cent (11 per cent for the first bracket only) of the combined surtax and normal tax. These provisions have the effect of increasing the tax as formerly liable by this approximate 11¾ per cent.

Other changes provide that a dependent may be claimed if he had had a gross income up to

\$600 for the taxable year. The amount previously held was \$500 under this provision. A tax payer or his spouse who has reached the age of 65 is not required to apply the "in excess of 5 per cent" limit on medical deductions for medical expenses incurred for either spouse. A taxpayer who sells his residence and buys a new residence within one year of date of sale will pay no immediate tax on any gain from the sale of the old house unless he receives more for it than he pays for the new one. There are other changes which may be of interest to physicians and attention to these in filing tax returns for 1951 is suggested.

MEMBERSHIP ASSESSMENTS 1952

Nineteen Fifty-two membership assessments are now due and payable for county, state and American Medical Associations. Prompt remittance from members will be appreciated by county, state and national offices. Arkansas Medical Society dues for 1952 are \$25. American Medical Association dues (members) for 1952 are likewise \$25. Fellowship dues in the American Medical Association have been rescinded for 1952, and in all probability, permanently. It is requested that members remit by one check to include county, state and A.M.A. dues to their county society secretary-treasurer who will, in turn, remit to the state office the state and national dues.

PERSONALS AND NEWS ITEMS

The following were registered at the Los Angeles session of the American Medical Association: W. A. Fowler, Fayetteville; Chas. Beeby, Huntsville; F. Walter Carruthers, Charles R. Henry, Little Rock; Art B. Martin, Fort Smith, and R. B. Robins, Camden.

The Office of Postgraduate Medicine is happy to announce that straight internships are available at the University Hospital in the various clinical departments. Physicians in the state who would like to spend a period of a few weeks to a few months or a longer period of time in the clinical residencies of the various departments are invited to write to the Office of Postgraduate Medicine regarding these. At present plans have been completed in the Departments of Medicine, Obstetrics and Gynecology and Anesthesiology.

Inquiries should be addressed to the Office

of Postgraduate Medicine or to the Head of the individual department.

John D. Olson, Fort Smith, has been elected a member of the Western Surgical Association.

I. Meschan and B. A. Rhinehart, Little Rock, and W. R. Brooksher, Fort Smith, attended the Chicago session of the Radiological Society of North America.

H. D. Nicholson recently addressed the Greater Little Rock Community Council on the University of Arkansas School of Medicine.

E. C. Hunt formerly of Ola, has moved to Conway.

L. H. McDaniel, Tyronza, has been elected orator of the Grand Lodge, F. & A. Masons of Arkansas.

The following attended the Chicago sessions of the American Academy of Dermatology and Syphilology during November: D. W. Goldstein, Fort Smith; Dorothy Goetz, Hot Springs National Park and L. M. Zell, Little Rock.

B. B. Wells, Little Rock, recently addressed The Clinical Conference of the Clay County Medical Society at Excelsior Springs, Missouri.

Edwin F. Gray, Little Rock, has been appointed Counselor for Arkansas to the Radiological Society of North America.

"What is Organized Medicine?" by J. J. Monfort, Batesville, appeared in the December issue of The Mississippi Doctor.

Dr. and Mrs. Louis A. Cohen, Little Rock, spent a recent vacation in Mexico where Dr. Cohen attended the International Congress on Mental Health.

The Office of Postgraduate Medicine is happy to announce that during January there will be two Postgraduate Courses offered at the Medical School.

The Department of Medicine is offering a course in Hematology on January 10 and 11.

The Department of Obstetrics and Gynecology will have a course on January 21, 22, and 23.

Registrations are being received for these courses at this time. A preliminary program will be mailed about the first of the year.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

CHEST X-RAYS ON ADMISSION PAY OFF

WILLIAM SIEGAL, M. D., ROBERT E. PLUNKETT, M. D.,
and HERMAN E. HILLEBOE, M. D., *The Modern*

Hospital, July, 1951.

Routine chest X-ray examination of patients admitted to general hospitals is a fruitful method of finding new cases of pulmonary tuberculosis. The patient, the hospital staff, and the community all reap benefits. The procedure yields greater returns in discovering unsuspected disease than mass X-rays of the general population or school groups.

In New York State, outside of New York City, there are 166 voluntary, nonprofit, and publicly supported general hospitals which annually admit over 650,000 patients. The plan prepared by the New York State Department of Health and supported by public funds was developed cooperatively through the Health Department and these hospitals. Policies and procedures were set up in '946 and briefly are as follows:

Any nonprofit general hospital with an in-patient admission rate sufficiently large to provide 4,000 admission chest X-rays annually is eligible to borrow complete photofluorographic equipment for taking 4" x 5" or 70 mm. films. The hospital received fifty cents for each report of an admission X-ray film submitted to the local health department. The Department recommends that hospitals install equipment as close to the admitting rooms as is practical in order to maintain a high percentage of X-rays on admitted patients.

Hospitals whose admission rate is less than 4,000 patients annually may also participate in the program by using their own equipment. For this service, they receive one dollar for each X-ray report submitted. Of the 166 general hospitals, 58 are eligible for loan of photofluorographic equipment and the remaining 108 can participate by using their own equipment. The 58 hospitals eligible for loan of equipment represent only 37 per cent of all the hospitals, but account for 67 per cent of all the admissions.

Any participating general hospital, in applying

to the State Health Department, agrees that it will:

1. Make every effort to X-ray the chests of ALL admitted patients, 15 years of age or over.
2. X-ray the chests of all employees not previously X-rayed and of all new employees.
3. Make no charge to the patient for the initial X-ray examination and interpretation or for additional X-rays or services necessary to establish a diagnosis of tuberculosis.
4. Use the recommended diagnostic classification.
5. Submit an X-ray report for each patient and employee examined under this program to the local health official.

It was not expected that uniform procedures for the routine X-raying of admissions would be possible for all the hospitals. The following routine, however, was suggested and is being carried out with minor changes. Identifying information is entered on a special report form at the time of admission for every patient 15 years of age or over. If possible, he is X-rayed, usually without disrobing, before being taken to his room. If he is too ill to be X-rayed on admission, this is done as soon as his physical condition permits. The admission films, 4" x 5", 70 mm. or 14" x 17", are processed and interpreted within twenty-four hours and the diagnoses, if negative or nontuberculous, are checked on a special report form.

If the admission film shows definite or suspected tuberculosis, additional chest X-rays and other examinations are made for diagnostic and clinical evaluation. The diagnosis is entered on the admission X-ray report. Completed admission X-ray reports are sent frequently to the local health officer. In addition, the hospital also furnishes the health officer with a monthly bill for the admission chest X-ray reports submitted to him. If active tuberculosis is found, the hospital then makes an official case report.

It is important that the hospitals use the same classification of disease, especially as it relates to

tuberculosis, in reporting the results of these X-rays. The admission small or large film diagnosis is not considered the final diagnosis or determination of activity. Nevertheless, a tentative diagnosis is necessary in case patients do not remain in the hospital long enough for further detailed study when it is indicated. The health officer should know what persons with possible tuberculosis return to the community from the hospital. A tentative diagnosis, therefore, is made on all films. If the tentative diagnosis is definite tuberculosis, an estimate of clinical status is also made. If probably active, the extent of the disease is also noted. Films which indicate pleural effusion otherwise unexplained are considered to be probably active tuberculosis.

The follow-up of cases of definite and suspected tuberculosis found by the hospital is the health officer's responsibility. The admission X-ray reports sent to the health officer are a check on the number billed by the hospital for reimbursement; they are used also for detailed monthly reports which are sent to the State Department of Health. The health officer maintains a separate file of positive X-ray reports and arranges for follow-up examinations. These include provision for diagnostic and clinical determination for each person reported and adequate medical care. For each report of a definite or suspected case of tuberculosis, the health officer submits to the Department at the end of six months, a summary of what has happened to the person during the interval.

An analysis of the initial chest X-ray examinations of adults admitted to the general hospitals participating in this program from May, 1947, to January, 1950, shows that:

A total of 195,751 patients, 15 years of age and over, had chest X-rays taken on admission to 41 general hospitals. The largest number of patients examined (48 per cent of the total) was in the age group 15 to 34. Females outnumbered males two to one; the ratio of females to males was in excess of four to one between the ages 15 to 34. From the initial hospital X-ray interpretations, 3,976 or 20.3 for every 1,000 patients X-rayed, were tentatively diagnosed definite or suspected tuberculosis. Of these 1,005 or 5.1 per 1,000 X-rayed, were considered to have probably active pulmonary tuberculosis. For all ages the prevalence of probably active tuberculosis was three times as great among males as among females, the highest prevalence being in males 45 years of age and over.

The distribution of the probably active cases by stage of disease was: minimal 47 per cent, moderately advanced 35 per cent, and far advanced 18 per cent. Fewer minimal and more advanced cases are found in general hospital patients than in community surveys.

Of 126,190 admission chest X-rays during the period between January, 1948, and June, 1949, inclusive, 2,642 showed evidence of definite or suspected tuberculosis, of which 2,145 had not been previously reported and were considered new cases. Of these, 71.7 per cent received follow-up examinations within six months of the initial hospital diagnosis.

On the basis of the number diagnosed definitely active, activity undetermined and suspicious for tuberculosis after follow-up, it is estimated that, if adequate follow-up had been possible for all the 2,145 new cases of definite or suspected tuberculosis, a ratio of 2.5 active cases of tuberculosis would be found for every 1,000 patients X-rayed.

WOMAN'S AUXILIARY NEWS

Mrs. O. W. Robinson, Paris, President of the Woman's Auxiliary to the Texas Medical Association, and Mrs. James G. Martindale, Hope, President of the Woman's Auxiliary to The Arkansas Medical Association were honored at the October 19th meeting of the Bowie-Miller Counties Auxiliary held at the Coffee Cup in Texarkana.

Mrs. E. T. Ellison, President, presided at the meeting. Hostesses for the luncheon were Mrs. William Hibbitts, Mrs. Roy Baskett, Mrs. P. H. Phillips, Mrs. Robert Gassler, and Mrs. C. A. Smith.

Mrs. A. A. Little introduced Mrs. Martindale who spoke on "Rural Health."

Mrs. William Hibbitts, Past-President of both state auxiliaries, introduced Mrs. Robinson. Mrs. Robinson discussed the National and State Objectives of the Auxiliary, stressing "Public Relations."

Thirty-two members and four guests were present.

Respectfully submitted,

Mrs. (C. H.) Aubrey Frank,
Chairman of Texas Public Relations.
Mrs. P. H. Phillips,
Chairman of Arkansas Publicity.

The Arkansas County Medical Auxiliary en-

tertained November 9 with a luncheon at Tal Dee's Inn honoring the four charter members of the auxiliary. The auxiliary was organized November 9, 1926, by the late Mrs. M. C. John.

The luncheon table was covered with a white cloth on which was placed a silver bowl containing white flowers and silver tulles. Silver candelabra holding white candles flanked the centerpiece. Individual bottles of perfume wrapped in silver paper and tied in white ribbon, the gift of a local drug store, marked the places.

The four charter members are Mrs. S. A. Drennen of Stuttgart, Mrs. R. H. Whitehead, Sr., and Mrs. C. A. Lumsden of DeWitt and Mrs. Lillie Lowe of Gillett.

Mrs. Milton John presided at the meeting, reading the minutes of the first meeting held 25 years ago. A telegram was read from the state president regretting her inability to attend the luncheon.

Those attending the luncheon other than those previously mentioned were: Mrs. Allen Talbot, Mrs. C. W. Rasco, Jr., and Mrs. R. H. Whitehead, Jr., of DeWitt; Mrs. J. G. Wilson, Keo; Mrs. Marcus T. Smith, Ticnor; Mrs. T. S. Van Duyn and Mrs. E. A. McCracken, Stuttgart.

The Pulaski County Medical Auxiliary held a luncheon meeting November 21 at the Y.W.C.A. in Little Rock.

The president, Mrs. Gordon P. Oates, presided over the meeting. Hostesses were: Mrs. K. W. Cosgrove, Mrs. J. B. Crawford, Mrs. Edwin L. Rushia, Mrs. L. F. Barrier, Mrs. J. A. Buchman and Mrs. Alvin E. Longstreth.

Dr. Daniel Autry, Advisor from the Pulaski County Medical Society, was an honored guest and brought greetings from his group.

Mrs. Drew Agar, Chairman of the Civil Defense Committee, reported that courses are now being offered in civil defense and home nursing and urged members to enroll.

Mrs. Mason Lawson, a member of the auxiliary and also Second Vice-President of the Woman's Auxiliary to the American Medical Society, made an excellent talk on the topic "Why Are You a Doctor's Wife?"

The next meeting of the auxiliary will be held on November 27 and will be a public relations meeting with the Greater Little Rock Federation of Women's Clubs.

Mrs. Alvin E. Longstreth,
Publicity Secretary,
Pulaski County Medical Auxiliary.

PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

(The following amendments to the Constitution and By-Laws are published in The Journal for information of members of the House of Delegates. They will be presented to that body for consideration at the 1952 annual session.)

The Committee on the Revision of the Constitution and By-Laws, meeting at Fort Smith, Arkansas, on Thursday, March 29th, made the following recommendations in regard to the Constitution and By-Laws of the Arkansas Medical Society:

1. That Article V of the Constitution be amended to read as follows:

"The House of Delegates shall be the legislative body of the Society, and shall consist of: (1) Delegates elected by the component county societies; (2) The Councilors; and (3) ex-officio, the President, President-Elect, Speaker and Vice-Speaker, Secretary and Past-Presidents of the Society, provided, however, that the ex-officio members shall have the power of voting on all subjects except the election of officers."

2. That Article IX (Sections 1 and 2) of the Constitution be amended to read as follows:

"Section 1. The Officers of this Society shall be a President, President-Elect, three Vice-Presidents, Speaker, Vice-Speaker, a Secretary, a Treasurer, ten Councilors and an Executive Secretary."

"Section 2. The President-Elect and Vice-Presidents, the Speaker and Vice-Speaker, the Secretary and the Treasurer shall be elected annually, each to serve a one-year term. On the expiration of his term as President-Elect, that person shall automatically succeed to the Presidency and shall serve as President for the ensuing year. Each year, five Councilors shall be elected, each to serve a two-year term. All officers shall serve until their successors are installed."

3. That Article X be deleted in its entirety.

4. That Chapter VI (Sections 1, 4 and 5) of the By-Laws be amended to read as follows:

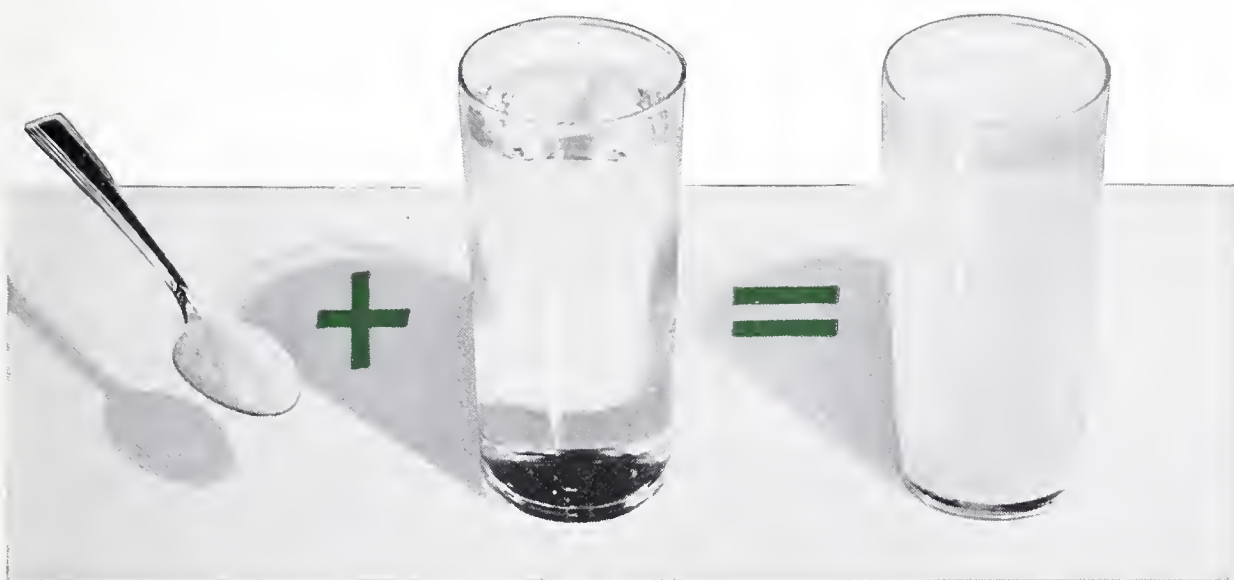
"Section 1. The President shall preside at all meetings of the Society and shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful."

"Section 4. The Treasurer shall give bond in the sum as directed by the Council. He shall demand and receive all funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands."

"Section 5. The Secretary, in case of vacancy in the office of Executive Secretary, shall assume the duties of that office pending the filling of the vacancy, and shall perform such other duties as are imposed by the Constitution and By-Laws. He shall be the scientific and professional adviser of the Executive Secretary, and shall assist the Executive Secretary concerning all matters without the jurisdiction of one not holding the degree Doctor of Medicine. The Secretary, as defined by the Constitution, shall be known as the Constitutional Secretary and shall give

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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

bond in the sum as directed by the Council. The amount of his salary shall be fixed by the Council."

5. That Chapter VI of the By-Laws include Sections 7, 8 and 9 as follows:

"Section 7. The Speaker shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require."

"Section 8. The Vice-Speaker shall officiate for the Speaker in the latter's absence or at his request. In case of death, resignation, or removal of the Speaker, the Vice-Speaker shall officiate during the unexpired term."

"Section 9. The Executive Secretary shall be the directing manager of the Society's Headquarters and Journal offices, and shall supervise the work of all salaried employees in the Society's offices. Such supervision shall be subject to directives from the House of Delegates, the Council, the Executive Committee, and the President of the Society. He shall discharge the administrative functions of the Society not within the duties of other officers or of committees to perform. He shall assist, at their request, all officers and committees, and shall keep himself informed in regard to non-professional matters affecting the medical profession, for the purpose of keeping himself qualified to perform the services herein mentioned. He shall be responsible for the execution and carrying out of the policies of the Society and in that connection shall perform all specific tasks committed to him by the Committees, the Council, and the Officers of this Society. The amount of his salary shall be fixed by the Council and he shall give bond in the sum as directed by the Council."

6. That Chapter VII (Sections 1, 2 and 4) of the By-Laws be amended to read as follows:

"Section 1. The Council shall meet on the first day of the Annual Session and daily during the session and at such other times as necessity may require, subject to the call of the chairman or on a petition of three Councilors. It shall meet on the last day of the Annual Session of the Society to organize and outline the work for the ensuing year. It shall elect a chairman. It shall, through its chairman, make an annual written report to the House of Delegates."

"Section 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall be prepared to make an annual written report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed on a properly itemized statement; but this shall not be construed to include his expenses in attending the Annual Session of the Society."

"Section 4. The Council shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately."

7. That Chapter VIII (Section 1) of the By-Laws be amended to read as follows:

"Section 1. The standing committees of this Society shall be as follows:

1. A Committee on Scientific Work.
2. A Committee on Medical Legislation.

3. A Committee on Health and Public Instruction.
4. A Committee on Medical Education and Hospitals.
5. A Committee on Public Relations.
6. A Committee on Medical Economics.
7. A Committee on Scientific Exhibits.
8. A Committee on Arrangements.

Unless otherwise provided, these committees shall be appointed by the President. Each committee shall consist of at least three members. A greater number may be appointed whenever circumstances require a larger committee. The President and Secretary shall be ex-officio members of all committees."

8. That Chapter XI of the By-Laws be amended to read as follows:

"The House of Delegates may amend any chapter of these By-Laws by a two-thirds vote of the Delegates present at any Annual Session, provided that each amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in a bulletin or Journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken."

PROCEEDINGS OF SOCIETIES

The Independence County Medical Society held its annual Christmas party December 10th and elected the following officers: President, Paul Gray; Vice-president, C. A. Churchill; Secretary-treasurer, Charles Taylor; Delegate, Ruth Junkin, and Alternate, Charles Taylor.

The Sebastian County Medical Society met December 11th for an address by James H. McFadden Lafayette, Indiana, on "Blood Transfusion and Transfusion Reactions." The following officers were elected: President, John D. Olson; Vice-president, J. B. Stewart; Secretary, G. E. Simpson, and Treasurer, M. B. Hoge.

Members of the Sebastian County Medical Society were guests of the Camp Chaffee Station Hospital Staff at dinner December 12th with the program presented by Perry Talkington, Dallas, "Some Concepts on Psychosomatic Medicine," and Edwin Rippey, Dallas, "Current Management Problems in Diabetes Mellitus."

(Continued from Page 192)

2. It has been found advantageous to clinically classify jaundice into three groups, namely, pre, intra and posthepatic.

3. Dividing the common duct into supra, retro, infra and intra duodenal portions aids in standardizing the various operative procedures applied to common duct surgery.

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INFANT FEEDING: COMMON ERRORS†*

ERNEST H. WATSON, M. D.
Ann Arbor, Michigan

The Pediatrician sees many children whose parents complain that the child is not feeding properly. Sometimes the complaints are borne out on further investigation, sometimes they are not. I felt it might be more profitable to discuss common errors I have encountered in child feeding, rather than to attempt a comprehensive discussion of the subject. Errors in child feeding are often committed by parents, occasionally by physicians.

Perhaps the commonest error today is the failure to employ breast feeding. There is a common opinion shared by many physicians, I fear, and by many mothers, that breast feeding is an antiquated method of feeding infants; that it is not worth any real effort to insure its continuance. The women may have gotten the idea from talking to other women that breast feeding is old fashioned, that it ties them down more than bottle feeding, or that it is in other ways unpleasant, unprofitable, and not worth bothering with. Many obstetricians and pediatricians have apparently been quick to condone this attitude on the part of young women. The fact is, that breast feeding remains the best, most convenient, and most economical way to feed a young infant during the first three or four months of life. Whether the new mother intends to breast feed her baby or not, her breast will undergo, during pregnancy, the necessary elaboration of glandular structure necessary to secretion of milk. Within three to five days after her baby is born her breasts will start to lactate unless estrogenic hormone has been used to suppress this activity. While in the lying-in hospital most women are amply able to breast feed their babies, many having more milk than the baby can possibly take. This is understandable. While

in the hospital, and after they have recovered from the after effects of giving birth to a baby, they are likely to be in a mental state conducive to lactation. The worry and fear of the delivery is behind them; they are likely to be the recipient of many evidences of esteem from husband and other members of their family. They do not have to accept responsibility for the care of their family for the time being. As a rule women lactate extremely well while in the hospital. However, it is another story when they go home. They must assume responsibility for their infant, and it is likely that they will also assume again the responsibility of looking after the rest of their family and perhaps doing most of their own work. Under these circumstances, breast milk, which has heretofore been abundant is likely to decrease somewhat, and it is at this point that breast feeding is usually interrupted. The story usually goes somewhat like this: On the second or third day home the infant is noted to cry and to appear hungry. The mother can sense that there is a definite slacking in her milk secretion. This causes her worry. It is true that the milk has, for the time being, let up, and if she worries very much about it, it is likely to decrease still further. If she has been prepared by her physician for this temporary let up it will not be severe, and it will almost certainly be of a temporary nature if she is properly advised. However, when consulted by the anxious mother, many physicians, at this point, are likely to prescribe a full formulas for the baby and to indicate to the woman that it's hardly worth-while to make any serious attempt to preserve or reestablish breast milk. This is unfortunate for the let up in milk flow which usually occurs a few days after the woman comes home from the hospital with her new baby can be of temporary duration. All that is necessary is a great deal of reassurance to the mother, perhaps some temporary use of supplementary formula, and patience. If the baby is put on a full formula he will be satiated and will not suck eagerly the next time he is put to breast with the result that the milk dwindles further and is lost. The mother believes that she had a true failure of breast feeding and, of course, will be in no humor to attempt

†From the Department of Pediatrics, University of Michigan Medical School, Ann Arbor, Michigan.

* Read before the 75th Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

it again with a subsequent baby. The fact is, that she, like nearly all mothers, who have lactated well in the hospital will continue to lactate well if properly advised. This point is discussed at some length because inspection of histories on hospital records indicate that the greatest majority of women can and do breast feed their babies while in the hospital, then promptly lose the breast milk on going home.

Another common error is to fail to realize that babies have individualized differences in their feeding preferences, particularly during the first days and weeks of life. Aldrich¹ indicated that it was necessary to feed some babies as much as ten or twelve times a day during the first few days of life to keep them contented. Their capacity for food is not great at the beginning, and they seem to prefer to take smaller amounts of food at more frequent intervals. If they are placed on a rigid schedule, and forced to remain hungry an hour or so between feedings they will cry, swallow much air and be colicky and unhappy. This may not seriously interfere with their growth and development, though it occasionally leads to more serious disturbances of feeding as will be mentioned later. It is very upsetting to the parents to have a crying baby and it is worth-while to attempt to individualize feedings as much as necessary to avoid this disturbance.

It has been shown that the use of the so-called demand schedule works out best with young babies. This simply means feeding the baby when he is hungry and with the additional corollary feeding him as much as he wants. This is nothing new. It is a system which must have been practiced by all mothers through all the years prior to the time that physicians began to tell mothers how and when to feed their babies. All primitive mothers undoubtedly put the baby to breast when he cried. Thus, he determined his own feeding schedule. It is interesting to notice that when this is done babies are more contented, cry less, have less colic, and in general are happier. Certainly their mothers are more satisfied, in that they can administer more completely and satisfactorily to the wants of their babies. Such infants, will, of their own accord, assume a schedule of approximately every four hours. It is doubtful that the care of these infants is actually greater because they may need to be fed more frequently during the first week or two. It is more nerve-racking to a mother to listen to her baby cry for an hour or so between feedings than it is to feed him two or three extra times during the

day. Many mothers confirm the truth of this statement. Child psychiatrists tell us that the child who is fed on a demand schedule and is fed as often as he wants during the first few weeks of life is thereby given a much more satisfactory start than if he is immediately placed on a four-hour schedule and is thus frustrated from the earliest days of his life.

An error often made is that of mistaking colic for hunger or food intolerance. This has a bearing on feeding practices mentioned above. It is very difficult at times to know whether a baby is crying because he is hungry or because he has colic. Advice to mothers is usually along the line that if the baby had taken three or more ounces of feeding within two hours prior to the time of crying it is not likely that he is hungry, but more likely he has colic or is uncomfortable for other cause. If the baby cries soon after feeding, seems to be straining, pulls up his legs, and gives other evidence of intermittent or colicky pain, he probably has colic. However, evidences such as these are sometimes misinterpreted and taken to mean that the food he is receiving does not agree with him. Actually, babies tend to have colic regardless of the food intake and it is my opinion that colic is more likely to be due to the technic or feeding schedule rather than to the kind of food given. Breast fed babies do not seem to have as much colic as bottle fed babies, but again the statement is a generality only, and if the breast milk is not entirely adequate and the baby does a great deal of crying and air swallowing he may have colic as bad as any bottle fed baby. As a matter of fact some physicians feel that bottle fed babies if fed on a demand schedule and fed all that appetite demands, will be more content and do less crying, and therefore, have less colic. This is entirely possible. Perhaps the error in this connection most frequently seen involves the conclusion that the formula is not being tolerated well and that the evidence of colic is also an evidence of food intolerance. This leads to numerous changes of formula but seldom to a cure of the cause of complaint. When colic is the complaint I feel that the formula should be investigated as to its composition, and if it is a good one, it should not be changed. The technic of feeding, the relation of crying to feeding and the simple home remedies for colic should all be discussed with the mother. Some babies do not belch well after feeding and mothers may develop quite a bit of anxiety because they have been told to stop the feedings after a few minutes and not to continue until the baby has belched. If the baby is hungry this may lead to a considerable period of

(¹Aldrich, C. A., and Hewitt, E. S., J.A.M.A. 135:340 Oct., 1947.)

crying and may in the long run lead to more colic than would have occurred had the belching not been attempted. I usually advise mothers to feed the baby as rapidly as he wants to eat. If he is bottle fed, the hole in the nipple should be of such size that the milk will drop slowly from the nipple when the bottle is inverted. If the baby can, and wants to take all of his feeding in ten minutes, this is entirely all right and it may be necessary only to interrupt his feeding once. I do not know of any carefully controlled studies, but some few observations that I have made indicate that the considerable amount of bother which some mothers go to, to belch the baby three or four times during the feeding is unwarranted. Limited observations indicate that babies may be belched at the end of feeding and do quite well. Again, it is necessary to repeat that air swallowing, whether it be from crying or from overlong sucking on a breast or bottle, which is not giving milk, is more likely to cause colic than anything else. Some babies are very poor eaters and they may suck a good deal of air in the mouth at the time milk is taken. It is necessary to watch these children carefully and sometimes to hold the cheek firmly so as to get better suction and prevent the simultaneous sucking of milk and air. The breast fed baby may bury his nose in the breast and have to interrupt feedings to breath through the mouth. This disturbs him and leads to air swallowing. All these little points of technic of feeding need to be discussed with the new mother. Some babies will continue to have colic no matter what is done for them, and perhaps the best thing to do in this case is to tell the mother that the colic will almost certainly cease by the end of the third month, that it will get increasingly less bothersome as the baby approaches this time. This reassurance helps some mothers to bear the annoyance of the crying baby, the floor walking, and attempting belching that usually go with the home management of colic. The administration of small amounts of warm water with or without a drop of oil of peppermint is an old remedy which has some virtue. Placing the baby on his stomach on a warm water bottle, covered by two or three thicknesses of toweling also seems to help. Oil of wintergreen should probably not be used as a carminative in these cases. I have known of one or two instances where the dosage was too large and salicylism resulted. One case that I recall ended fatally.

Closely tied up with the preceding discussion is the practice of switching from formula to formula in an attempt to find one which just exactly fits the crying, fussy baby. Physicians are per-

haps driven to this by complaining parents who feel that if the physician could only find the right formula all the babies troubles would be over. I try to tell such parents that it is not astonishing that the baby, a few days or weeks of age is having some difficulty with his feeding. Before birth he had no experience whatsoever with feeding for himself and some patience must be exercised in his behalf while his gastro-intestinal tract learns to accept milk, digest it, and settle down to regular functioning. It is useless in these infants to switch from formula to formula hoping to find one tailored exactly to his requirements. The trouble is not with the formula, but with the baby, or perhaps with the technic of feeding. It is not uncommon in pediatric hospitals to find a child who comes in with a real feeding problem who may have had a new formula every week for six or seven weeks. Under these circumstances a very unsatisfactory attitude toward the baby, his feeding, and his physician develops on the part of the parents. This might all be forestalled if the parents were simply appraised of the fact that it takes babies a little while to begin to function smoothly.

There is one practice which can hardly be called an error which deserves some comment. Many physicians employ proprietary formulas which are more expensive than is warranted. There are so many preparations of formula on the market today that it would be futile to attempt to discuss them. Formula can be had, ready prepared to feed; or in liquid form which needs only diluting to supply not only the milk requirement but vitamins as well. The formula may be had in powdered form; this is convenient when traveling, but not nearly as convenient as breast feeding, it should be kept in mind. The whole point is, that the artificially fed baby will as a rule do quite well on evaporated milk, karo syrup, and water. This is not said to disparage any proprietary formula. Many of these are excellent, and the only objection to them is their cost. However, I feel that it is not exactly right to prescribe a proprietary formula which may cost three times as much as evaporated milk and karo syrup formula when there is no evidence that the more expensive one is better.

I have been able to meet almost every feeding problem by the use of one of the simple mixtures which follows: For normal healthy babies who cannot have breast milk, a formula of evaporated milk, karo syrup and water suffices for the vast majority. For the day's formula, the evaporated milk should be supplied in about one ounce per pound of weight; the water in about one and one-half ounces per pound of weight, and the karo

syrup may be added in the amount of one ounce to the total daily formula until the baby is six months or so of age. The karo may be continued after this time if it is still desired to increase the baby's weight as rapidly as possible; for those who have excellent weight or are overweight, the karo may be removed at this time or earlier. When babies have diarrhea it is necessary to change the feeding. Sometimes feeding by mouth needs to be interrupted completely for a day or so. Following this, it has been our custom to give the baby boiled skimmed milk for a short period of time. This can be made by simply skimming milk and boiling it for ten minutes or so, but is usually rather conveniently and economically prepared from skimmed milk powder which can be purchased in small cans. There is an in between stage when babies can take a formula stronger than skimmed milk but may not yet tolerate a formula containing a full fat percentage. For this purpose, half skimmed milk which can be purchased under several trade names or can be prepared in the home or hospital, seems to work out best. There are very few conditions when one or the other of these three simple formulas will not suffice. Sometimes in extremely allergic children it is necessary, for a time, to feed amino acid preparations which avoid completely the problem of milk allergy. This is a special example and not commonly encountered. In this connection it has been my experience that the use of goats milk may give excellent results for a short while, but sensitization to this milk, which is similar to cows milk, soon occurs and no great gain is made by its use. The use of soy bean milk also may tide the patient over a period when eczema or asthma are very bothersome, but may not be used for more than a few weeks without the strong likelihood of hypoproteinemia or other disturbance of nutrition.

When children become ill, as with upper respiratory infection, it is desirable to change their feeding somewhat, usually by diluting the formula. This is common knowledge and widely practiced. The reason that the milk is less well tolerated is perhaps not appreciated by all physicians. When a child becomes ill he usually loses his tolerance for fat, and next for carbohydrate before he loses his tolerance for proteins. This is the reason that a diluted formula or a skimmed milk formula devoid of the fat is better tolerated. The Germans introduced the use of sour milk formulas many years ago, and in Europe the use of buttermilk for sick infants is still widely practiced. This is soundly based, I think, and perhaps we should take advantage of it more often. The buttermilk

as usually prepared contains very small amounts of fat and also a small amount of carbohydrate. It is, of course, high in protein and is well tolerated by many infants when full formula is not.

The physician is frequently consulted by the parents of the pre-school child with the complaint that the child does not drink as much milk as the parent wishes. The reverse is true in the second half of the first year when children may drink more milk than they should, unless the parents understand that a quart of milk is perhaps the upper limit that they should allow the child to take. Milk has a very high satiety value and if the child is permitted to take a quart and a half or two quarts of milk per day he is unlikely to have any appetite for the supplemental foods, fruit, vegetables and cereal. I was not long ago consulted by the mother of an eight-month-old child whose complaint was that the child would not eat fruit or vegetables. It was rather puzzling because she described the usual thirty-two-ounce formula made up of evaporated milk, karo syrup, and water that we use almost routinely in children of this age. On questioning, however, it came out that she made up the formula twice a day and that the infant was in fact, taking two quarts of milk a day. He was in excellent physical condition and his weight was within the normal range. His hemoglobin had dropped a little below that usually seen at eight months of age, and a definite feeding problem was arising. It was easily solved by limiting the milk intake to one quart a day, whereon the child began to accept other foods and nutritional anemia and other undesirable results of feeding milk alone were obviated.

In the matter of vitamin administration it appears that very few errors are made during the first year of the baby's life. It is true that some vitamin preparations cost more than it is necessary to pay to get adequate protection against vitamin deficiency disease. It should be remembered that only two vitamins need be added to the infant's milk intake to guard against deficiency disease. These two are vitamin C and vitamin D. Our practice of giving orange juice and codliver oil was entirely in years gone by, and many physicians still stick to this regime. There are some reasons why the new concentrated vitamin preparations are preferable. Orange juice, as a source of vitamin C may occasionally bring about allergic manifestations. It has one other drawback in that at the present time it is perhaps the most expensive source of vitamin C. It takes a pretty fair sized orange to supply 25 mg. of ascorbic acid. It is generally agreed that 50 mg. a day is per-

haps the desired intake during infancy. This means that two oranges per day will need to be used to supply a sufficient amount of juice to furnish 50 mg. of ascorbic acid. In northern markets two large oranges may cost as much as eight to ten cents per day. This is several times the cost of a similar amount of ascorbic acid. Similarly there is a very definite tendency to get away from cod-liver oil given in teaspoonful doses. Many infants have aspirated this material into the lungs and have had a chronic pneumonitis as the result. The pharmaceutical houses have supplied us with vitamin concentrates at a very reasonable price, and it is possible to obtain these for three or four cents a day. I think that the use of these concentrates is to be recommended. Some of the more popular ones contain vitamins A, B1, B2, C, D, pantothenic acid, niacin and perhaps other vitamins as well. As stated above only vitamin C and D are necessary. I think, therefore, that the preparation which supplies approximately 50 mg. of ascorbic acid daily and four or five hundred USP units of vitamin D in the recommended daily dose should be selected. The inclusion of concentrates to supply vitamin B1 and B2, niacin, etc., are not justifiable from the standpoint of nutritional necessity. All of these B components are present in breast milk or cow's milk formula in adequate amounts. Some manufacturers have attempted to meet this by supplying a preparation which contains vitamin A, B, D, and C. It should be noted here that the vitamin A simply comes along with the vitamin D since the latter is derived almost always from one of the fish liver oils. The presence of vitamin A in the triple vitamin combination cannot be objected to for its removal probably would make products more expensive than they are at the present time.

There is a consensus I believe that approximately three months of age is the best time to begin to supplement the infants milk intake with strained cereal, fruits and vegetables. In my opinion, it is unnecessary to begin supplementation before this time. In some urban areas I sense a sort of popularity contest going on between mothers of young babies with each claiming that his doctor is more modern and forward looking because he began supplementing the baby's formula at two months of age or one month of age. Materials other than milk given at a few weeks of age are very likely to appear largely in the stool and are probably of little value to the infant. One does see occasionally the infant of two months or two and one-half months of age who is very voracious eater and who seems better satisfied if some

cereal is added to his milk intake. There is, of course, room for individualization here as there is at all periods of childhood so far as feeding is concerned. It seems to me that it is hardly worthwhile to attempt much feeding other than milk and vitamins to the baby less than three-month of age.

Perhaps the greatest error of all in feeding children is committed by the over anxious mother. I refer, of course, to the frequently encountered error of attempting to urge or force the child to eat more than he wants. This point should be discussed with young mothers because they may in their anxiety to take good care of their infant fall into the very common habit of urging him to eat so objectionably, from his standpoint, that he finally almost refuses entirely. This is noticed sometimes with infants, and very commonly in pre-school children. It is worth-while to tell the mother when her baby is eating very well at six, eight, or ten months of age that the time is coming in the near future when he will show much less interest in food and will from time to time show almost a complete refusal of food for a day or two at a time. If she is prepared for this ahead of time she will not make the common error of becoming much too concerned and using all means from teasing, bribery, and even threats, or force to get the child to eat what she thinks he needs. There is pressure from many sources on the young mother urging her to try to get her child to eat more food than he perhaps wants or needs. Many children, because of inherited body build, and size of bony frame work may be quite a bit lighter and more slenderly built than other children of their same age. The mother of the slender, light weight child is behind the well-known eight ball so far as her in-laws, neighbors, and bridge partners are concerned. She may have developed quite a mental state about this and in her eagerness to correct what she believes are bad habits of eating, on part of the child, endanger an almost complete refusal by her ill considered efforts to get him to eat. This matter, perhaps is common knowledge, but I would judge that it is not because of a number of patients of pre-school and school age that brought to my office with the complaint that they won't eat.

Before leaving the subject of feeding children, I would like to leave a few practical suggestions that have served me well. When using formula composed of evaporated milk, karo syrup and water I have found that with most mothers it is advantageous to permit them to make up one

quart of the formula daily right from the very beginning. When the child is taken home from the hospital he is usually satisfied on three or three and one-half ounces of milk per feeding. There is no reason at all why the mother must make up the formula of seven or eight ounces of evaporated milk and the proper amount of karo syrup and water instead of making up a whole quart of formula and feeding it until it is finished. The use of refrigerators is now so widely spread that formula properly made and stored can be made for two or three days without any danger whatsoever. Therefore, I tell the mothers to make up the tall can of evaporated milk, (13 oz.) to one quart of water which has been boiled and cooled. To this is added one ounce of karo syrup. The formula is placed in as many bottles as the mother thinks will be used and served until it is gone. As the child gets older, fewer and fewer bottles will be filled until at about three or four months of age he has reduced his feedings to four per day and the quart of formula makes four eight-ounce bottles. In this connection it is of interest to note that the solubulized vitamin preparations which are now so readily available on the market at reasonable costs may be added to the whole days formula. The doses that we usually prescribe contain a sufficient excess that even though the infant may not take all of the formula he still will get all of the vitamins that he needs. The manufacturers of these products have gone to considerable trouble to render the mixture of vitamins dispersible or soluble in milk, and these preparations will not cling to the side of the bottle, but will remain dispersed through the formula. Our usual practices involve at least a hundred per cent excess in the amount of vitamins prescribed for daily use, so therefore the refusal of a small amount of the formula does not entail the possibility of vitamin deficiency. Putting the daily vitamins in the whole formula is a matter of convenience for the mother. However, many still stick to the traditional method of placing the vitamin material directly in the infant's mouth. This has no serious objection, but does increase the mothers work.

Lactic acid milk was formerly more widely used in this country than it is at the present time. It is worth-while remembering that this is the one formula which will remain in usable form for many hours, even in hot climates, without refrigeration. The addition of five to eight drops of lactic acid per ounce of evaporated milk in the formula ren-

ders the resulting acid milk rather a poor media for bacterial multiplication. Therefore, it may be kept under conditions which would cause other milk to sour and still remain safe, for feeding. This information is not widely needed at the present time because so many American families have fairly adequate refrigeration facilities of one kind or another.

I think we should not leave the subject of common errors in infant feeding without mentioning the fact that the premature infant is a special problem, not only in his food tolerance but also in technic of feeding. We are about at that stage now in medical care for our children that we are ready to do a much better job in the care of premature infants. One of the reasons why premature infants have such a high mortality has been the difficulty in finding a food or in the technic of feeding them. It has been demonstrated that premature infants seem to do better on a formula which is not quite so high in fat as is usually prescribed for the full term infant. This problem can be met by using half skimmed milk. There are two or three proprietary products on the market at the present time, namely Dryco and Dalactum which will serve this purpose particularly for hospitals which have only a few premature infants at a time and do not have the facilities and staff to make up their own formulas in a more complicated fashion. Both of the products mentioned above are readily prepared to supply the food needs of the premature infant. As Levine has shown these infants need a very high intake of vitamin C usually in the neighborhood of 100 mg. per day if their protein metabolism is to be entirely normal. It is customary to give premature infants, after the first few days of life, two or three times the amount of the various vitamins which would be given to a full term infant. The reason for this lies in the fact that if the premature infant survives, his growth rate is much accelerated over that of the normal full term infant, and vitamin intake at all ages should be proportional to growth rate, and not necessarily to body mass.

Summary

Breast feeding is best for infant and mother and it is a mistake not to employ it for the first few months of life. If the bottle fed baby is a feeding problem, the trouble more often lies with the technic of feeding than with the formula. For nearly all healthy infants a formula made of evaporated milk, karo syrup, and water is entirely satisfactory.

CLINICAL MANAGEMENT OF URINARY TRACT INFECTIONS*

GERALD H. TEASLEY, M. D.

Texarkana

Proper clinical management of urinary tract infections depends upon four factors: 1. The site of infection, 2. Type of infection, 3. Pathology associated with infection, 4. Choice of treatment. Fundamental principles of good medical practice are followed in determining these factors.

To locate the site of infection one should follow a definite procedure, starting with a careful history and complete physical examination. Questions should be asked concerning habits of voiding, burning, hematuria, size of stream, previous infections, familial renal diseases, stones, congenital anomalies, association with tuberculosis. In addition, one must not overlook the possibility of renal diseases manifested by gastro-intestinal symptoms, easy fatigability, loss of weight, and other vague complaints. Remembering this, the alert physician will diagnose many cases of renal disease when the presenting symptom indicates another system should be involved.

The physical examination should be complete. Investigate the teeth, gums, tonsils, sinuses, lymph nodes, abdominal masses, vaginal secretions, status of the prostate, size of kidneys, areas of tenderness, etc. Do not neglect any part of the body. The patient should realize following the history and physical examination that nothing has been left unexplored in an effort to find the cause of the difficulty.

Certain laboratory procedures are essential, and without them the physician is treating the patient by guess rather than by judgment. These include a microscopic study of urinary sediment and a gram stain of the sediment. The urine must be a catheterized specimen from a female and a second glass specimen from a male, collected in a sterile container. It should be centrifuged for several minutes and the sediment examined under a microscope. The presence of blood cells, both white and red, should be noted. Following this, a gram stain of the sediment should be made. This can be completed in three to five minutes and the stained smear examined under the oil immersion lens for bacteria. This completes the rough determination of the type infection, and

we have satisfied the first two basic factors described as essential for proper clinical management of urinary tract infections.

For a more exact determination of the type infections, cultures of the urine collected as outlined above should be started. Some physicians and urologists do not think the cultures are essential since over 85% of the bacteria are among the colon group of organisms. Only when the clinical response is unsatisfactory do they investigate the type of organisms by cultures.

A more detailed study of these patients is desirable but not always available. Such a study begins with a complete blood count, serology, X-ray of the chest, excretory urogram, cystoscopic examination and, when excretory urography is not satisfactorily diagnostic, retrograde pyelograms. During cystoscopy specimens of urine can be obtained from each kidney for individual study. In addition to the gram stain, an acid fast stain can be made and a culture for tubercle bacilli started when indicated. These procedures are usually completed by the urologist when patients are referred for detailed examination. Even under the best of circumstances, it will be found in some cases that the exact cause of the infection is difficult to determine. Often all the procedures mentioned above must be repeated to isolate the offending organism and the lesion associated with the infection.

To satisfy the third basic factor, namely the pathology associated with the infection, the physician must correlate all the findings in the history, physical examination, laboratory tests and other urologic procedures. In the vast majority of cases, this can be done and the rationale of treatment justified. The experienced physician may not require all the tests mentioned above in most cases, but he will require all of them in some cases.

Having reached this stage of diagnosis, the next step is the choice of treatment. We must not limit our advice only to the genitourinary system. We must regard the individual as a composite of several complex systems, all interdependent. Remove infected tonsils, treat respiratory and sinus infections; obtain good dental consultation and care; correct improper eating habits; replace vitamin deficiencies; treat pelvic conditions. Remove calculi, strictures, prostatic obstruction, tumors and other lesions. Without an uninterrupted flow of urine from the renal pelvis through the urethral meatus, no urologic infection can be controlled.

After specific treatment is started, the urine should be checked at regular intervals to determine the efficacy of treatment. Collecting a sterile specimen of urine as outlined above, the

* Read before the 75th Annual Session, Arkansas Medical Society, Little Rock, April 23, 1951.

sediment should be examined under the microscope and stains made to estimate the progress of the infection. Weekly examinations should be made and treatment continued until normal findings are present on two or more occasions. It is often good policy to treat the patient with the proper drug one week each month for three to four months.

Proper selection of a drug should embrace the following criteria: 1. The offending organisms is sensitive to the drug selected, 2. The drug chosen is of low toxicity, 3. The cost of treatment is not prohibitive. The response of organisms to drugs can be anticipated in general according to their staining characteristics as demonstrated by the gram stain. These characteristics are shown in Table I ⁽¹⁾ for the organisms most commonly found in the urinary tract.

Table I
Results of Gram Stain in Common Urinary
Organisms

Gram Negative Bacilli	Gram Negative Cocci	Gram Positive Cocci
B. coli	Gonococci	Staphylococci
A. aerogenes		Streptococci
B. proteus		Str. faecalis
Ps. aeruginosa		
Paracolon		
B. alcaligenes		
B. friedlander		

The listing of staining characteristics aids materially in the selection of a drug for treatment. We have today the most potent drugs in all the history of medicine with which to combat infection. However, each is not all powerful and is successful only when used in its proper place. They are not uniformly successful in different patients or even in the same patient with recurring infection from the same organisms. The differences arise from variations in the host and gradations of sensitivity of the organisms to the drug. However, in general, the specificity of drugs for certain organisms can be used as a criteria for their selection. Proceeding with this knowledge concerning the effectiveness of drugs, the following information is listed for use in the selection of a specific drug for the treatment of urinary tract infections.

Penicillin—an effective, relatively nontoxic antibiotic for treatment of all coccal infections.⁽¹¹⁾ It is of little value in the treatment of gram negative bacilli. Since 85% of all urinary tract infections ⁽²⁾ are caused by these organisms, the indiscriminate use of penicillin in urinary infections without knowing the type organism is to be condemned. It should be given by intra-muscular in-

jections and is relatively inexpensive. Average dose 300,000 units daily. Should be used until temperature is normal at least 48 hours.

Sulfonamides—highly effective against gram negative bacilli. Perhaps the most frequently used forms are sulfadiazine, sulfacetamide, sulfacetamide, sulfamerazine, and gantrisin.^(3, 4, 5, 11) They are effective over a wide range of pH. Since these drugs are eliminated in the urine, high urinary concentrations can be obtained with relatively small doses, e.g. one-half gram four times daily, except gantrisin. This drug requires higher doses. Combinations of sulfonamides combine the lethal action or larger doses with the decreased toxicity of smaller ones. They are particularly effective against colon and paracolon groups of organisms. Gantrisin is reported as the drug of choice in treatment of infections caused by proteus bacillus. These drugs are quite inexpensive.

Mandelic acid preparations — quite effective against the colon group of organisms and often of value in proteus infections. They must not be used in the presence of glomerular or tubular disease of the kidneys. They are effective only when the pH of the urine is below 5.5. Organisms do not develop sensitivity to this drug. They are relatively inexpensive.^(6, 11)

Chloromycetin aureomycin, and terramycin ^(2, 7, 8, 11)—all are extremely effective in the treatment of infections from many gram negative bacilli. Aureomycin often causes nausea but this can usually be controlled. It is almost specific for the treatment of streptococcus faecalis. These drugs are more effective in treatment of epididymitis and prostatitis than the sulfonamide and mandelic acid preparations. A desirable dosage schedule is two grams the first 24 hours and one gram daily in divided doses thereafter until the infection is controlled. These drugs are quite expensive.

Dihydrostreptomycin — effective against acid fast organisms and gram negative bacilli. It is less effective against the coccal group. Organisms develop resistance to this drug rapidly, therefore high dosage must be employed initially or its use will be of little value. It can be given only by injection at least twice daily and may require hospitalization in order to be administered. Its use therefore may be quite expensive.^(9, 10, 11)

Polymyxin—moderately effective against gram negative organisms and very good for pseudomonas infections. It is moderately nephrotoxic and neurotoxic symptoms often appear. It must

be given by injections in dosage of 2.5 mgm. per kilo body weight daily.^(11, 12)

The above are the most commonly used drugs in combatting urinary tract infections. The table below outlines a choice of drugs according to the type organism found. It is a suggestion only and represents comments from various writers and the experience of the author. It is not infallible. Combinations of drugs are desirable when a mixed infection is present. Destroying one organism may allow another not affected by the drug used to grow unchecked. The combination may prevent such an undesirable effect. See Table II.⁽¹⁾

Table II
Choice of Drugs

Gram Negative Bacilli	Streptococcus Faecalis
1. Sulfonamides	1. Aureomycin
2. Chloromycetin	2. Mandelic acid
3. Streptomycin	3. Sulfadiazine
4. Aureomycin	4. Streptomycin
5. Mandelic acid	
6. Polymxin	
Gram Positive Cocci	Gram Negative Cocci (Gonococci)
1. Sulfadiazine	1. Penicillin
2. Penicillin	2. Sulfonamides
3. Arsenicals	3. Chloromycetin
	4. Streptomycin

Conclusions

1. Clinical management of urinary tract infections depends upon four factors:
 - a. The site of infection,
 - b. Type of infection,
 - c. Pathology associated with infection,
 - d. Choice of treatment.
2. Developing these factors includes a careful history, complete physical examination, and certain essential laboratory procedures.
3. Do not limit treatment to genitourinary tract. Treat the patient.
4. Selection of a drug depends upon:
 - a. The offending organism is sensitive to the drug selected,
 - b. The drug chosen is of low toxicity,
 - c. The cost of treatment is not prohibitive.
5. More specific treatment for infections can be obtained by determining the general type of organism present and selecting the drug usually effective against this organism.
6. A brief summary of various authorities is given, with an outline of drugs often found effective in the treatment of specific urinary tract infections.

WOMAN'S AUXILIARY NEWS

The Woman's Auxiliary to the Pulaski County Medical Society met December 19, 1951, at the Y. W. C. A. in Little Rock for the annual Christmas luncheon.

Hostesses were Mrs. H. Ray Fulmer, Mrs. Edwin Gray, Mrs. Frank Kumpuris, Mrs. Robert Henry, Mrs. Drew Agar, and Mrs. Peter Thomas.

Mrs. Gordon P. Oates, president, presided over a short business session.

The theme for the program, presented by Mrs. Hoyt Choate, chairman, was "Christmas Around the World." The luncheon tables were decorated according to traditions of the countries represented, and these Christmas customs were discussed by Auxiliary members who have come to Little Rock from these countries, as follows: Germany, Mrs. H. G. Lonsdale; England and Scotland, Mrs. B. A. Rhinehart and Mrs. William A. Clark; Pan-American Countries, Mrs. Tom Johnson.

Mrs. Alvin E. Longstreth
Publicity Secretary
Pulaski County Medical
Auxiliary.

The Woman's Auxiliary to the Garland County Medical Society met at the new home of Mrs. Frank Adams.

The president, Mrs. Robert Atkinson, called the meeting to order and the minutes were read and corrected and the roll was called. The treasurer reported a balance of \$220.37. The members approved the action of the committee in sending the Martha Harding Gann Fund \$5.

Mrs. Atkinson thanked Mrs. Walter Klugh, Mrs. Albert Tribble and Mrs. John Dodson for their co-operation in assembling the boxes for the needy. Every member prepared a Christmas box for a needy child.

Mrs. Atkinson asked that anyone who could help with the entertainment for the old folks home in January contact her.

The business meeting was concluded and Miss Dora Jane Ledgerwood and her choral group presented a program of beautiful Christmas music.

Mrs. Adams and her co-hostesses, Mrs. King Wade, Sr., Mrs. Lohren Bohnen, and Mrs. Jack Wright served delicious refreshments from a beautifully decorated Christmas table.

Mrs. C. W. Parkerson,
Secretary
Garland County Medical
Auxiliary.

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EDITORIAL

A NEW FACE FOR THE JOURNAL

With the January, 1952, issue, The Journal appears with a new cover which it is hoped will receive favorable comment. The new cover embodies a change in the advertising of the lower half and is being generally employed by state medical journals at the request of Eli Lilly and Company.

The Journal is especially grateful to Fenwick Sanitarium of Covington, Louisiana, and to Dr. Roy Carl Young for kindness in relinquishing this position which they have held for many years in order that we might accept the new cover.

The friendly support over the years of these

advertisers as well as of our many other advertising accounts is a source of gratification to those intimately associated with publication of The Journal and of our entire membership. Friends they are indeed and we bespeak for them the cordial reciprocity of Arkansas physicians.

SOCIAL SECURITY BENEFITS FOR WORLD
WAR II SERVICE

Under recent amendments, service in World War for 90 days or more will give credits of \$160 a month for each month of service. Such credits apply to those who saw active duty in any branch of the armed forces in the period, September 15, 1950, through July 24, 1947, and who were honorably discharged. The 90-day provision does not apply if discharge or release was because of disability incurred or aggravated in line of duty.

Of particular interest may be the provision whereby survivors of men who died while in military service, regardless of the length of that service. Such a man who died in military service may have accumulated a Social Security credit on the basis of military service alone and his survivors may be eligible for monthly benefit payments after August, 1950.

More complete information may be obtained from local offices of the Social Security board, Federal Security Agency.

RANDOM THOUGHTS OF THE SECRETARY

December 23rd. Bob Robins comes into state-wide publicity via the Arkansas Democrat in a well-written article, and for the once, there is no mention of that Texan with the gas pipe and the donkey.

January 1st. Strolling down Rue Royal in New Orleans this morning meeting Virgil Payne engaged in furthering gun bartering by Payne the younger, then in shirt-sleeve weather to watch Maryland and Tennessee in the Sugar Bowl conflict, becoming immediately aware that Maryland does not play football in a Tennessee waltz style.

January 13th. Today President Henry makes the Sunday Democrat in extensive quotation and this may be the beginning of good public relations.

January 15th. Today with Foltz, Goldstein and Kramer to Huntsville's new hospital, visiting briefly with Beeby and May, later enjoying angel food cake with Mrs. May's "topping," and with that kind of food it is small wonder that a Sebastian County Society banquet would not greatly interest May * * * supervised by hotel greeter, John David Gates, scion of a noble gourmet, however, the Ward does itself proud with steaks rating superior in anyone's book, and the annual banquet session of the Sebastian County Medical Society is once again an event.

January 17th. Discussing the amenities of living, radiological ethics and the care of students with Fount Richardson this afternoon and late dining with the youngster at the A Q Chicken House where we have a brief glimpse at Siler, no doubt seeing how this section of the famous broiler country differs from his.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

TREATMENT OF MINIMAL TUBERCULOSIS

JULIA JONES, M. D.

The NTA Bulletin, September, 1951.

All pulmonary tuberculosis is minimal in its early stages and progression may be avoided by effective treatment. Minimal disease is usually unaccompanied by symptomatic illness so is frequently demonstrated only by roentgenogram. The discovery of disease in its early and curable forms is one of the purposes of case-finding programs. While the wisdom of these programs is established, they fall short of complete accomplishment unless subsequent treatment is effective. Once minimal disease has been identified, its progression must be accepted as failure.

Because the lesions are small and the patient has few, if any, symptoms, one is tempted to attach less significance to minimal disease than to the advanced disease. Rather than to reassure himself and the patient by thinking of "just a little spot on the lung," the physician needs to consider the lesion as the focal area from which disabling disease may occur and, to take advantage of the opportunity for simple, less costly, and more effective treatment.

Individuals vary in their ability to heal tuberculous infection. The majority of those first infected with the disease remain well and infection is indicated only by reaction to tuberculin. Small areas of calcification may appear eventually in lung or lymph nodes. In others irreversible damage occurs, and necrotic tissues may liquefy and slough into nearby bronchi and healthy lung. While the patient may be without symptoms, the X-ray reveals small shadows of pneumonic disease and a "minimal" lesion is diagnosed. The patient may then develop sufficient resistance to prevent further extension. In this case, he either remains well or may harbor areas of chronic infection which undergo evolution after considerable lapse of time.

Except by hindsight, it is not possible to distinguish between the individual who can control his minimal lesion without treatment and the patient in whom progressive disease may occur. This often proves costly for the patient and the community. Since some undetected lesions are controlled without treatment, residual shadows

may later be encountered in routine X-ray examinations. For this reason various factors including the pathologic age and character of lesions discovered in asymptomatic individuals need consideration before treatment is advised.

Previous X-ray examinations may demonstrate that the lesion is newly acquired and must be assumed active and unstable. Symptoms or the presence of tubercle bacilli in sputum or gastric contents may indicate activity. In adolescents and young adults, most minimal disease is recently acquired and quite unstable. While new disease may be acquired throughout life, lesions occurring in older persons may represent old unidentified disease needing only periodic examination. Lesions must be subjected to clinical scrutiny establishing their duration and potentialities. From these studies will emerge those patients with early, minimal disease. Effective treatment of this group constitutes the major problem in dealing with minimal disease.

Early lesions are small areas of tuberculous bronchopneumonia which may resolve completely, leaving essentially normal lung tissue. On the other hand, the tissues within this area may be destroyed leaving cavities from which dissemination may occur. Even in the smallest lesion demonstrable by X-ray, some areas have undergone destructive changes. The outcome of any case depends upon the extent and character of the disease, individual factors of resistance, and the manner in which the latter are influenced by treatment.

The therapeutic program is developed from the following considerations. Since the minimal lesion represents recent extension of disease from microscopic foci of greater duration, it must be assumed that the patient, at this stage, has inadequate resistance to control his disease. Treatment must be directed toward increasing resistance. Much of the lesion may be reversible if the lesion has been discovered soon after it has developed. Immediate treatment is urgent before further evolution produces less reversible lesions. If further extensions of disease take place, each new lesion has potentialities for

breakdown and further dissemination. The presence of small necrotic foci must be assumed in all minimal lesions and their extent limits the effectiveness of cure.

Rest is the foundation of the therapeutic program. Experience indicates that rest favors development of resistance, thus enabling the tissues to suppress activity of the tubercle bacillus, remove products of inflammation, and to control areas more permanently damaged. Spreading disease occurs less often when patients are in bed. Bronchial secretions are decreased during bed rest, and this factor probably plays an important part in decreasing the hazard of dissemination through the bronchi.

Bed rest is most effective during the early period of treatment when the lesions are reversible and most unstable. For this reason, it is advocated that patients with early lesions be put to bed immediately upon identification of their lesions. Often this is difficult since the patient feels well. Compromises which permit him to continue his normal activity while the lesion is observed, may jeopardize his future health and happiness.

It is difficult for an asymptomatic individual to make the transition from an active life to complete rest. Given thorough understanding of his problem and the odds at stake and given day to day assistance in meeting the aggravations of inactivity, the usual patient is less unhappy from his treatment than from a set-back of progressive disease. An intelligent individual is able to accept the depressing aspects of tuberculosis infection and inactivity. Recognition of individual problems is necessary and special assistance may be needed.

It seems wise to continue bed rest until stability of the lesion can be assumed. This implies absence of constitutional symptoms and an unchanging lesion by roentgenogram. Clearing of reversible elements occurs usually in from four to six months. Subsequent change by X-ray may be slight and quite slow. From this point treatment is directed toward control of more permanently damaged areas whose presence must be assumed. The time necessary depends on the patient's clinical course, personal situation, and anticipated demands of his normal activities. Resumption of activity must be gradual since bed rest is deconditioning.

In some cases, the administration of streptomycin and para-aminosalicylic acid may be wise.

But bacterial resistance may develop and, since the minimal lesion is potentially the advanced lesion, an effort must be made to conserve this temporary support for urgent needs.

Most patients recover permanently from minimal disease if rest is adequate. A few develop more chronic disease which continues to threaten health and in this group it may occasionally be necessary to add collapse or other surgical therapy.

Effective treatment of minimal tuberculosis must be prompt and thorough. The patient must be thoughtfully taught about his disease if full cooperation is to be achieved. Most patients recover completely and resume their previous activities, but needs for vocational retraining must be visualized. Regular medical supervision wisely continues after recovery and resumption of normal living.

BOOK REVIEW

Antibiotic Therapy by Henry Welsh, Ph.D. and Charles N. Lewis, M.D.

"Antibiotic Therapy", which at present is being published by the Arundel Press, Inc., P. O. Box 2606, Washington, D. C., priced at \$10.00, is the first comprehensive writing that includes information on all of the available antibiotics. The volume admirably provides an excellent summary of the properties and uses of the antibiotics as well as the side effects. The book is divided into three sections. The first section is a biographical sketch of the discoverers of the various antibiotics, as well as the isolation and development of the antibiotics. The second section deals with a detailed discussion of each antibiotic including antimicrobial spectrum, pharmacology, and dosage forms. The third section is devoted to detailed discussions of the treatment of specific diseases and attempts to sum up the experience and results of the use of a variety of antibiotics in individual diseases. The book is fairly well documented, and at the end of each chapter a selected bibliography is presented.

The volume describes experimental work so that future developments may be readily evaluated. The diseases and their sensitivities to the antibiotics are outlined in specific detail, as well as the danger of the development of resistant strains. Thirty-six effective graphical summaries present very useful information which should, to a great extent, eliminate dosage calculations for the individual patient.

The toxicity, absorption, excretion, and blood level maintenance of tyrothricin, penicillin, streptomycin, dihydrastreptomycin, aureomycin, bacitracin, chloramphenicol, and terramycin are presented in detail. In addition several antibiotics not yet commercially available to any extent such as polymyxin, neomycin, and viomycin are discussed.

"Antibiotic Therapy" is an excellent clinical desk guide for the rational use of all antibiotics in all susceptible diseases and should serve efficiently as a quick reference to the busy private practicing physicians.

STUDIES IN INFERTILITY*

PAUL H. WOODS, M. D.
Hot Springs National Park

Sterility and infertility may be complex problems. Indeed, when one looks into the events leading to a successful impregnation and to the many factors which may prevent this accomplishment, the conclusion may be one of wonder that a successful pregnancy is ever accomplished. However, fortunately, these problems may be relative sometimes instead of being absolute, even though formidable barriers are often encountered.

There have been many technical and strict definitions of what constitutes sterility and constitutes infertility, but for the purposes of this paper the term sterility denotes absolute loss of fertility, and the term infertility denotes impaired or decreased fertility. It must be remembered that there are two partners to be considered, and before any final conclusions can be drawn each partner should be considered individually and then the partnership collectively. It is only through the bilateral approach to this problem that any degree of success can be obtained consistently. Clinically, the fertility of the partnership should be evaluated, and not that of a single individual alone. If the problem is approached from a clinical standpoint, the definition of a fertile couple is a couple able to produce pregnancy and gestation, while the sterile couple is unable to do so, whatever the causes may be. The problem of sterility and infertility would cover the entire field of gynecology, however, this discussion will be limited to the somewhat narrow phase of investigation in diagnosis. It is also not the purpose of this paper to discuss the problems of interrupted pregnancy.

Since the time that man has learned to write, references to sterility have crept into literature and the usual forms of communication. The burden of barrenness was usually cast upon the wife, and in many races was, and still is, considered grounds for divorce. Statistics show that approximately 17 per cent of marriages in this country fail to beget offspring, and about five to eight per cent result involuntarily in only one child. This last factor may well be influenced by the incidence of criminal abortions and certain harmful contraception. It is only during the past few years that the male partner has been actively considered and investigated as to his

possible contribution to the state of infertility or sterility. Many males, however, become highly indignant when their "manhood" is questioned, and the utmost diplomacy and tact is often called for. Indeed, according to some statistics, the male is either directly or indirectly responsible for approximately 26 per cent of the cases of infertility or sterility considered.

If the normal physiology of conception and the events leading thereto are reviewed, it will be found that there is a multiplicity of opportunities for the chain to be broken. Approximately one time per lunar month or about 13 times a year, an ovum is cast off from the ovary at ovulation and is swept into the fimbriated end of the fallopian tube to begin its journey towards the uterus. Correspondingly, the endometrium of the uterus undergoes certain changes in preparation for implantation, whether fertilization occurs or not. According to present-day concepts, fertilization is thought to occur in the distal end of the tube, after sperms having been deposited in the vagina, traverse their way through the cervix, uterus, and tube. The ovum is thought to be fairly inert and possess no motile power of its own, but the spermatozoa normally are quite motile and their progress to the ovarian end of the tube should not take more than two to six hours from the time of ejaculation. Following fertilization, the developing zygote undergoes the formation of its trophoblast on the remainder of the journey down the tube towards implantation in the prepared endometrium in the uterus. Basically, then, the fundamental factors involved in this entire process are (1) delivery of normal spermatozoa, (2) reception of spermatozoa, (3) delivery of normal ovum, and (4) establishment of favorable site for implantation for the fertilized zygote.

Most couples who marry believe they can conceive at will, but many are disappointed and surprised after a few years of fruitless union. Many couples practice some sort of contraception beginning immediately with marriage who plan to have children later on, then to find that had they tried, they would have been unable to conceive. Then, on the other hand, there are the couples who conceive after only one or more months of coital attempts, and then the couples who manage to achieve success after a few years of attempts. Fortunately, the majority of couples fit into the group of conception after a short span of time. It is for the unfortunate ones who have not been blessed by progeny after an adequate period of trial to seek help, and too often that help is either lacking or inadequate. It has

* Read before the Seventy-Fifth Annual Session, Arkansas Medical Society, Little Rock, April 25, 1951.

been the author's experience that most women who consult him for the problem of infertility have previously sought advice, most often from several sources. The usual story is that after a cursory examination of the female pelvis, they are informed there is nothing wrong with them and to keep on doing what they are doing. Too often, apparently, that is all the help they can get. Simple examination of the anatomy of the female does not reveal all the information needed to evaluate the fertility index.

By using the means of hypothetical case, it is hoped to present here some investigative procedures that help to form a diagnosis, which are comprehensive, but within the scope of every practitioner. As it has been shown, many factors affect or influence fertility, and it is only after a thorough investigation of the couple's reproductive physiology that intelligent corrective measures can be instituted. Assuming that a couple presents themselves with the problem of being childless involuntarily for at least one year or more, what measures can be taken to help this couple. A diagnosis must first be made based on facts before haphazard treatment is instituted.

Here again, history is of the utmost importance. This should include the duration of the marriage, previous marriages of both partners, and previous pregnancies of both partners, as well as the types of contraception used, if any. Previous diseases should be elicited, particularly venereal, glandular, or the usual diseases that may affect the gonads. Any known functional defects should be brought out at this time, such as genital malformations, premature ejaculation, or any degree of impotence. A careful evaluation should be made of the wife's previous pregnancies as to how they terminated, particularly as to any sequelae like chills or fever denoting infection in the pelvis. In addition, the wife's history should contain a careful menstrual cycle description, occurrence of leukorrhea, and the types and amounts of douching. A detailed sexual history is of great importance and should include the frequency of coitus, positions used, dyspareunia, libido, orgasm occurrence, and the forms in which sex desires are expressed. The answers to these questions are often surprising, and frequently have direct bearing upon the fertility problem. It is probably better to discuss these matters separately with the husband and wife as often times one partner is reluctant to freely discuss topics like these in the presence of the other. Any previous gynecologic treatment for the relief of sterility should be ascer-

tained or any surgery performed upon the couple in the past will often be of help to know. It is wise at this stage to take little time to discuss with the couple the course of the investigation to be followed, the reasons for some of the tests, and the probable length of time to be involved before arriving at any conclusions. This will assure the practitioner of better cooperation and decrease the number of couples dropping out before the analysis is completed. A certain amount of time must be involved, because one must wait from menstrual cycle to menstrual cycle for the next step in the investigation.

Many couples will have developed surprising ideas and peculiar beliefs which usually manifest themselves at this time, and it is of great benefit to instruct them in some of the simple facts of fertility. The purpose of coitus is to bathe the cervix in the seminal pool. To do this, it is best accomplished by the usual position of coitus with the female partner in the extreme lithotomy position or using a pillow under the buttocks. After ejaculation, the male organ should be allowed to remain in the vagina until erection has subsided. If an undetected urethral stricture is present in the male, the main ejaculation is usually not delivered until after erection has subsided. Following coitus, the female should remain in the elevated lithotomy position for the following 10 to 15 minutes at least. In certain cases of retrodisplaced uteri, with the cervix in an anterior position, it is of value for the female to lie upon her abdomen for a short period following coitus. Frequently, the use of precoital douches containing glucose for the metabolism and longevity of the spermatozoa and a slightly alkaline medium to neutralize hyperacidity of the vagina is of value. Commercial products of this nature are available.

The next step in the investigation is the complete examination of the wife. The husband's examination may be deferred to a later time. In addition to the usual general physical of the female, special attention should be paid to the skeletal proportions, fat and hair distribution, secondary sex characteristics, and other signs of glandular stigmata. In a very high per cent of patients examined, very few gross abnormalities which directly attribute to infertility are discovered. A helpful adjunct to the general picture is the use of laboratory work such as the blood counts, serology, Rh and anti Rh determinations, urinalysis, and the BMR. The patient is instructed in the technic of taking her daily basal temperatures, as it is believed that this is

a fairly good index of ovulation. These temperatures should be taken at the same time every day except during the menses, preferably just before arising in the morning and then recorded on any of the many forms of commercial charts available for this purpose. The oral temperature has been advocated by some, but probably the rectal temperature is a more reliable and accurate index. Stress is placed upon reading the thermometer accurately, as the variation is usually only a few tenths of a degree. There are some commercial thermometers available at the present which have a broader scale and were designed for more accurate and easier readings in this type of work.

Before subjecting the female to further manipulations and tests, the husband should have a thorough semen analysis. This can be accomplished simultaneously with the wife's second visit, and should be timed to be at the fertile phase of the menstrual cycle. It is at the time of the fertile phase of the cycle that the cervical mucus plug is most receptive to spermatozoa, and by timing the semen analysis with this phase, a short cut can be obtained also to determine spermigration through the cervical plug. This test is done by placing a drop of the cervical mucus on a slide and a drop of the ejaculate adjacent to and touching the mucus, but not mixed, the so-called Kurzok Miller test. The slide can be observed for a period of time under the microscope to determine the degree of penetration. There is some doubt as whether or not spermatozoa possess a lytic action on the cervical mucus plug, but it is accepted that an infected mucus plug produces a hostile barrier to penetration by sperms. At this same visit, the pH of the vaginal secretions and cervical secretions can be made. Only the seminal specimen is for this visit; it is not necessary for the husband to be present. The wife has been furnished a clean, wide mouth bottle at her previous visit and the proper instructions as how to collect the specimen, which consist of the following:

1. The husband should abstain from ejaculation for 3-5 days before collecting the specimen.
 2. The specimen can be collected either by coitus interruptus or masturbation.
 3. Collect the specimen in the clean, dry, wide mouth jar. No condom specimen.
 4. Transport the specimen to the office at room temperature.
 5. Bring specimen to the office within two hours after passage.
- By spacing the ejaculations 3-5 days apart, the

semen will contain the maximum number and highest quality of sperms that the individual possesses. Many couples desiring pregnancy try coitus too often and too close together with resultant diminishing of semen quality, thus increasing the problem. In addition to the Kurzok Miller test as above, a semen analysis is done, and should include the volume, viscosity, pH, type of motility, percentage of motility, cell count and abnormal forms present. In addition, a 24-hour test should be made for motility. The most important factors are cell count, motility, abnormal forms present and the presence of 24-hour motility of cells at room temperature. A cell count of less than sixty million per cubic centimeter is considered below the critical level for fertility. Likewise, the presence of more than 25 per cent abnormal cells and motility duration less than 24 hours indicates impaired fertility. Even though the semen analysis shows some impairment of fertility, the investigation of the female should continue as to ascertain if she has some contributing factor which would make the impaired semen more of a serious import. The male factor should be checked and rechecked for an accurate evaluation. If contributing factors are found, the male may be referred to a competent urologist for a complete urogenital evaluation.

The third visit of the wife is arranged during the first 24 hours of the menses. At this time, an endometrial biopsy is taken by means of the endometrial biopsy curette, which is a simple inexpensive instrument of many uses in the average practitioner's office. This test is done primarily to determine if ovulation has occurred with the resultant formation of a premenstrual type of endometrium. The endometrium is a direct index of a glandular function of the patient and the response of the uterus to that of the menses. At this time tubal studies are done to determine their patency, and it is done at this stage of the cycle to prevent disruption of a pregnancy possibly occurring during the fertile phase. Tubal studies may be made using gases such as oxygen or carbon dioxide as in the Rubin test, or instilling some of the radiopaque medium into the uterus and tubes and taking serial X-ray films. Usually one film is taken after slowly injecting up to 5 cc of contrast medium. If peritoneal spill is observed at this time, no further films are necessary, but if spill does not occur, a 24-hour film is indicated. Peritoneal spill is usually needed to be sure that the tubes are completely patent. This author feels that the advantages of hysterosalpingo-

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assist in maintaining a sterile field just prior to the execution of surgery upon the cervix.

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graphy far outweigh the advantages of the Rubin test and is a much more accurate index of tubal patency.

The fifth visit of the wife is arranged preferably at the fertile phase of the cycle as close to coitus as possible, preferably within two hours. She is instructed to come to the office not wearing any external pads, tampons, or absorbent material in the vagina or over the vulva. Aspiration from the cervix is done to determine the presence of active motile spermatozoa; this test is now known as the Huhner test. Further aspirations from the uterine cavity is of further value, first making sure that sperms are not carried from the cervix into the uterine cavity by the investigating instrument. The demonstration of active motile spermatozoa in the cervical canal and particularly in the uterine cavity proves that there is a delivery of sperms and a reception of sperms, irregardless of all other factors.

However, while the Huhner test cannot replace semen analysis as the first and most important procedure in attacking the causes of sterility, it probably ranks next in importance. Normally, 10 per cent of the spermatozoa are alive in the vaginal pool at the end of two hours following coitus. Aspiration of the portio vaginalis with the finding of many motile spermatozoa connotes delivery of sperms. Aspiration of the cervical canal will normally reveal five or more active spermatozoa per high power field. If no sperms are found in the cervical canal after repeated examinations, it means that there is either failure of delivery of spermatozoa or the cervical mucus is refractive to the sperms.

By means of these few simple tests, a comprehensive picture can be obtained as to the couples' fertility index. Any and all of the procedures outlined here are usually readily available to the practitioner. It may be well to repeat at this point that no single test is sufficient. Only when confirmation is received from several supplementary procedures can a definite interpretation of fertility or sterility be made. After all the information is obtained, it can be correlated usually into primary diagnosis, contributing factors, and a prognosis. The treatment recommended or necessary will depend entirely upon the causative factors found, and will be left to other writings.

SUMMARY

1. The problem of sterility and infertility has been briefly discussed.
2. The normal physiology of conception and the events leading thereto have been

briefly discussed.

3. A presentation of a simple but comprehensive investigation of infertility is made.
4. Stress is laid upon the fact that no single test is sufficient for an interpretation of the fertility index. The fertility of the partnership should be evaluated, and not that of a single individual alone.
5. Only through a thorough approach to the problem can an adequate diagnosis be made and intelligent treatment instituted.

DERMATITIS, CONTACT: PENICILLIN

ROY E. SCHIRMER, M. D.
Fort Smith

Urticarial reactions to penicillin are fairly common, but the contact type reaction is rare. Two cases have appeared lately, one of which is unusual because of the source.

N. M., a hospital nurse had a marked contact dermatitis involving both hands, and to a lesser degree, arms and face. There were occasional bouts of marked angio edema of the face. She observed that the dermatitis would improve during the week-ends that she was off duty, and would almost clear when off duty as long as a week.

Patch tests were negative to all common things about apartment and hospital. The patch test to penicillin was weak positive.

Intradermal test .02cc (20,000 units to cc) she had a marked flare up of hands, arms, face, a generalized urticaria and dyspnea. Adrenalin was required.

Some improvement was noted when she did not mix or give penicillin, or wash syringes used in penicillin therapy. When working in wards where most patients were receiving penicillin, the dermatitis became generalized. She transferred to a hospital where penicillin was not used and cleared up completely.

J. B., white, male, age 41, had a similar dermatitis of the face about one year ago, and was confined to the home for one month. The day previous to the outbreak, he had nicked his face with the razor. Finding penicillin ointment in the medicine chest, he applied it to the cuts.

Some months later, the family doctor was called to the home to give penicillin shots to the wife and child. The doctor broke off the needle and gave the disposable syringe to the child. The syringe broke and was taken to the father to be fixed.

Twenty-four to 36 hours later, the father again

had a dermatitis of the face. Patch test to Penicillin G—weakly positive.

In both cases the patch test was very weak. As has been stated repeatedly by several authors, the penicillin skin tests appear to be of limited value in determining severe reactors.

PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

(The following amendments to the Constitution and By-Laws are published in The Journal for information of members of the House of Delegates. They will be presented to that body for consideration at the 1952 annual session.)

The Committee on the Revision of the Constitution and By-Laws, meeting at Fort Smith, Arkansas, on Thursday, March 29th, made the following recommendations in regard to the Constitution and By-Laws of the Arkansas Medical Society:

1. That Article V of the Constitution be amended to read as follows:

"The House of Delegates shall be the legislative body of the Society, and shall consist of: (1) Delegates elected by the component county societies; (2) The Councilors; and (3) ex-officio, the President, President-Elect, Speaker and Vice-Speaker, Secretary and Past-Presidents of the Society, provided, however, that the ex-officio members shall have the power of voting on all subjects except the election of officers."

2. That Article IX (Sections 1 and 2) of the Constitution be amended to read as follows:

"Section 1. The Officers of this Society shall be a President, President-Elect, three Vice-Presidents, Speaker, Vice-Speaker, a Secretary, a Treasurer, ten Councilors and an Executive Secretary."

"Section 2. The President-Elect and Vice-Presidents, the Speaker and Vice-Speaker, the Secretary and the Treasurer shall be elected annually, each to serve a one-year term. On the expiration of his term as President-Elect, that person shall automatically succeed to the Presidency and shall serve as President for the ensuing year. Each year, five Councilors shall be elected, each to serve a two-year term. All officers shall serve until their successors are installed."

3. That Article X be deleted in its entirety.

4. That Chapter VI (Sections 1, 4 and 5) of the By-Laws be amended to read as follows:

"Section 1. The President shall preside at all meetings of the Society and shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful."

"Section 4. The Treasurer shall give bond in the sum as directed by the Council. He shall demand and receive all funds due the Society, together with bequests and donations. He shall pay money out of the Treasury only on a written order of the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands."

"Section 5. The Secretary, in case of vacancy in the

office of Executive Secretary, shall assume the duties of that office pending the filling of the vacancy, and shall perform such other duties as are imposed by the Constitution and By-Laws. He shall be the scientific and professional adviser of the Executive Secretary, and shall assist the Executive Secretary concerning all matters without the jurisdiction of one not holding the degree Doctor of Medicine. The Secretary, as defined by the Constitution, shall be known as the Constitutional Secretary and shall give bond in the sum as directed by the Council. The amount of his salary shall be fixed by the Council."

5. That Chapter VI of the By-Laws include Sections 7, 8 and 9 as follows:

"Section 7. The Speaker shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require."

"Section 8. The Vice-Speaker shall officiate for the Speaker in the latter's absence or at his request. In case of death, resignation, or removal of the Speaker, the Vice-Speaker shall officiate during the unexpired term."

"Section 9. The Executive Secretary shall be the directing manager of the Society's Headquarters and Journal offices, and shall supervise the work of all salaried employees in the Society's offices. Such supervision shall be subject to directives from the House of Delegates, the Council, the Executive Committee, and the President of the Society. He shall discharge the administrative functions of the Society not within the duties of other officers or of committees to perform. He shall assist, at their request, all officers and committees, and shall keep himself informed in regard to non-professional matters affecting the medical profession, for the purpose of keeping himself qualified to perform the services herein mentioned. He shall be responsible for the execution and carrying out of the policies of the Society and in that connection shall perform all specific tasks committed to him by the Committees, the Council, and the Officers of this Society. The amount of his salary shall be fixed by the Council and he shall give bond in the sum as directed by the Council."

6. That Chapter VII (Sections 1, 2 and 4) of the By-Laws be amended to read as follows:

"Section 1. The Council shall meet on the first day of the Annual Session and daily during the session and at such other times as necessity may require, subject to the call of the chairman or on a petition of three Councilors. It shall meet on the last day of the Annual Session of the Society to organize and outline the work for the ensuing year. It shall elect a chairman. It shall, through its chairman, make an annual written report to the House of Delegates."

"Section 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall be prepared to make an annual written report of his work, and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed on a properly itemized statement; but this shall not be construed to include his expenses in attending the Annual Session of the Society."

"Section 4. The Council shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and

chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately."

7. That Chapter VIII (Section I) of the By-Laws be amended to read as follows:

"Section I. The standing committees of this Society shall be as follows:

1. A Committee on Scientific Work.
2. A Committee on Medical Legislation.
3. A Committee on Health and Public Instruction.
4. A Committee on Medical Education and Hospitals.
5. A Committee on Public Relations.
6. A Committee on Medical Economics.
7. A Committee on Scientific Exhibits.
8. A Committee on Arrangements.

Unless otherwise provided, these committees shall be appointed by the President. Each committee shall consist of at least three members. A greater number may be appointed whenever circumstances require a larger committee. The President and Secretary shall be ex-officio members of all committees."

8. That Chapter XI of the By-Laws be amended to read as follows:

"The House of Delegates may amend any chapter of these By-Laws by a two-thirds vote of the Delegates present at any Annual Session, provided that each amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published twice during the year in a bulletin or Journal of this Society, or sent officially to each component society at least two months before the meeting at which final action is to be taken."

PROCEEDINGS OF SOCIETIES

The Independence County Medical Society met January 14th at the North Arkansas Clinic at Batesville. The program consisted of a discussion on radio programs and their place in public relations and the playing of a transcript of a broadcast "Tea for Three" which was furnished by the American Medical Association. C. A. Churchill read a paper on "Management of Diabetes in Pregnancy." A report from the Archives of Surgery was read by J. J. Monfort.

Pulaski County Medical Society was addressed January 7th by Ralph Braund, Memphis, on "Diagnosis and Management of the Patient with a Lump in His Neck."

Edwin F. Gray, Secretary.

The Fifth American Congress on Obstetrics and Gynecology will be held in Cincinnati, Ohio, March 31 to April 4, 1952.

This Congress has been planned for all those who are interested in the care of mothers and new born infants.

The registration fee is \$5 for members of the American Committee on Maternal Welfare, Inc.,

and can be paid at anytime. Persons not already members will pay \$10; \$5 of which will go for membership dues for 1952 including a subscription to The Mother.

Those who have attended the previous congresses have been well repaid by the time and effort made for attendance. The programs have been adapted to bring the latest and best information regarding care of mothers and children. The scientific exhibits have merited more time than most attendants have been able to give them.

The Sebastian County Medical Society met in annual banquet session January 15th with Major Paul I. Kowallek, M. C., U. S. A., speaking on medical experiences in Korea.

G. E. Simpson, Secretary.

The Office of Postgraduate Medicine is happy to announce that during February there will be a Postgraduate Course in the Department of Pediatrics. The program is as follows:

Monday, February 18, 1952

Application of Angiocardiography—

I. Meschan, M. D.
Poisoning Emergencies.....Eugene Crawley, M. D.
Neonatal Emergencies.....Jack R. Hild, M. D.
HistoplasmosisAlice Gamble, M. D.
Case PresentationsHouse Staff
Pediatric AnesthesiaEdwin Rushia, M. D.

Tuesday, February 19, 1952

Pediatric Neurological Diagnosis—

Wm. K. Jordan, M. D.
Developmental EvaluationEdmond Irwin, M. D.
Traumatic Lesions in the Newborn—
Jack R. Hild, M. D.
Diabetic Management in Pediatrics—

J. T. Wortham, M. D.
Management of Dwarfism....G. W. Lawson, M. D.
Current Advances in Therapy....B. P. Briggs, M. D.

During the month of March there will be two Postgraduate Courses offered at the Medical School. The Department of Radiology will hold a course on March 7 and 8 instead of March 6 and 7, as previously scheduled. The Department of Surgery will hold a three-day course on March 24, 25, 26.

Registrations are being received for these courses at this time.

The Fourth Annual Neuropsychiatric Meeting will be held at the Veterans Administration Hospital, North Little Rock, February 28th and 29th, 1952. There will be no charge for registration and attendance of interested professional personnel



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will be welcomed subject only to limitations of seating facilities. Further information may be obtained from Dr. Edwin S. Chappell, Director of Professional Education, Veterans Administration Hospital, North Little Rock, Arkansas.

The Mid-Continent Psychiatric Association will meet in Kansas City, Missouri, at the Hotel President on April 26th and 27th, 1952. Among the speakers will be Leo H. Bartemeier, M. D., President of the American Psychiatric Association, Francis J. Braceland, M. D., Psychiatrist-in-Chief, The Institute of Living, Hartford, Connecticut, and Dexter M. Bullard, M. D., Medical Director, Chestnut Lodge Sanitarium, Rockville, Maryland.

All interested physicians are invited to attend. For further information write to Paul Hines, M. D., Secretary-Treasurer, 2625 West Paseo, Kansas City, Missouri.

PERSONALS AND NEWS ITEMS

H. King Wade, Jr., Hot Springs National Park, recently received the distinguished service award of the Chamber of Commerce for outstanding community service.

D. W. Goldstein, T. P. Foltz, R. G. Kramer and W. R. Brooksher, Fort Smith, conducted a diagnostic cancer clinic at Huntsville January 15th under the sponsorship of the Madison County Medical Society and the Arkansas Cancer Society.

K. W. Cosgrove, Little Rock, recently addressed the Pan-American Congress on Ophthalmology in Mexico City.

D. W. Goldstein, Fort Smith, and J. P. Price, Jr., Monticello, have been appointed to the Arkansas State Board of Health.

Dr. Malcolm T. MacEachern will address the joint convention session of the Arkansas Hospital Association, the Arkansas Association of Medical Record Librarians, the Arkansas State Nurses Association and the Arkansas Dietetic Association at Hot Springs National Park, May 5th and 6th. Dr. MacEachern is Director of Professional Relations, American Hospital Association.

James C. Dunbar has moved from Salem to Mountain Home.

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The JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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No. 10

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No. 10

THERAPY OF ACUTE LEUKEMIA IN CHILDREN*

W. G. KLINGBERG, M.D.†
Saint Louis

The type of leukemia seen most frequently in children is the acute form, in contradistinction to adults in whom the chronic form is most prevalent. Chronic leukemia is seen in children generally above eight years of age, but actually is almost a rare disease. Regardless of the type seen, leukemia, along with, perhaps, the collagen diseases and chronic nephritis constitutes one of the major stumbling blocks in therapy in the Pediatric age group.

Within recent years the incidence of leukemia has apparently been on the increase. It now constitutes a major problem as a single disease entity in hospital pediatrics. In the past several years the over-all admission rate to the St. Louis Children's Hospital has been from 3,000 to 3,500 per year. During these years we have averaged 16-24 new cases of leukemia per year. This is an average of 0.5% of all hospital admissions which is significant for a single disease entity. This increase in incidence is undoubtedly due in some degree to the increased awareness and diagnostic acumen of physicians in general, but I do not feel that that would account for even the main part of the increase. A satisfactory reason for the increase in the disease is not apparent at this time.

1st SLIDE: In this slide, having to do with the age and sex of children with acute leukemia you can see that of 50 children of our series, 32 were boys and 18 were girls or about a 2:1 ratio. The age incidence is very interesting in that in boys the incidence in age groups 0-5; 5-10; and 10-15 was essentially the same while in the girls the highest incidence was in the 0-5 years with a decreasing incidence in the succeeding groups. This immediately makes one think of a hormonal basis

in the etiology of leukemia. In the next Slide (No. 2) the age incidence of 1,500 cases of acute leukemia compiled from the literature shows the highest incidence in the 2-3 year age groups with a decreasing incidence as age progresses.

The clinical picture of acute leukemia in children is somewhat protean in its manifestations, but sufficiently characteristic symptoms occur frequently enough to allow one to entertain the diagnosis on their occurrence. Slide No. 3. In the order of their frequency these symptoms are seen. Asthenia, manifest by the complaints of the child or his actions is the most common. Almost always associated with asthenia will be pallor, purpura and fever. The purpura may vary from petechiae to hemorrhagic ecchymotic areas with minor or no trauma. Fever is usually variable. When anemia is severe or whenever mediastinal glandular involvement is great, dyspnea is noticed and may become severe orthopnea. Lymphadenopathy and Splenomegaly are seen in variable degree in about 25-50% of the cases. Rheumatoid pains quite suggestive of Rheumatic fever are quite frequent and at times severe bone pain which may cause night cries and discomfort is seen. Occasionally severe stomatitis and abdominal pain occur and we have seen several patients with central nervous system involvement manifesting signs and symptoms of increased intracranial pressure or even transverse myelitis.

The diagnostic criterion of acute leukemia are found in the blood picture and bone marrow. Slide No. 4. The first three are characteristically seen—Anemia; a granulopenia usually below 20% and therefore mononuclear cells or lymphocytes above 80%; Thrombocytopenia which is one of the most characteristic findings and one so infrequently noticed by doctors or reported by technicians. The presence of abnormal young cells or blast forms in the peripheral blood, when seen, are diagnostic. In acute leukemia either leucocytosis or leucopenia may be seen and extremes of either occur. Counts of several hundred thousand down to 1,000 or so are seen. All cases where the peripheral blood is suggestive should be substantiated by the only true diagnostic test

* Read before the Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

† From the Department of Pediatrics, Washington University School of Medicine and the St. Louis Children's Hospital, St. Louis, Missouri.

—a bone marrow examination. Here, sheets of blast cells are seen completely replacing the normal myeloid, erythroid and megakaryocyte elements.

A few other diseases causing similar symptoms and signs are listed in Slide No. 5 (Read them off). In the following slides are pictured patients with other diseases which simulate the picture of acute leukemia. Slide No. 6 and No. 7. This baby has Christian-Schullers disease with hepatosplenomegaly and a petechial skin rash. Slide No. 8. This child has a petechial eruption seen in Rocky Mountain Spotted Fever. Slide No. 9. This child had a neuroblastoma with metastasis to the eyes resulting in hemorrhage, and Slide No. 10, this child gave the appearance of chloroma which is leukemia with retrobulbar involvement to produce proptosis, but who actually had neuroblastoma with metastasis.

Therapeutically, all we actually have to offer is symptomatic treatment and possible prolongation of life. There is no known cure for leukemia and to date no case has survived. With no other therapy other than occasional blood transfusions to allow the child to feel better for awhile the average length of life after a diagnosis is made is 3 to 5 months. For some time X-ray irradiation and in the past several years P^{32} irradiation have been used in the therapy of acute leukemia. It is our feeling that this form of therapy is quite dangerous in children as we have seen both more rapid death than should be expected and even sudden death in a few hours following irradiation. Drugs such as Urethane and Nitrogen Mustard which attack cells in mitosis again are not very effective in acute leukemia. Bone Marrow Extracts as used by Dr. J. V. Cooke in the late 30's effected an appreciable number of remissions but these did not last long. ACTH and Cortisone are capable of effecting remissions, also of short duration. Spontaneous remissions are known to occur following acute infections or just spontaneously but these have been quite unusual in our experience. Diamond reports them in 10% of his cases.

Of all the therapeutic agents that have been employed in recent years, none have attracted such widespread interest and attention as have the folic acid antagonists. After folic acid was discovered it was found by Farber and associates that leukemic cells contained abnormally high amounts of this compound. They even administered folic acid to acute leukemic children to find that the course of the disease was speeded up. For some time it has been known that structurally

related compounds may be biologically antagonistic so with that idea in mind the folic acid antagonists were developed.

Slide No. 11 shows the structural formulas of folic acid and the most important antagonists. (Explain differences). All of these compounds, in therapeutic dosages, have the same action, toxic effects, and potentialities. None is better than the others. Our experience has been with Aminopterin primarily. The mode of action of these drugs as a means of chemotherapy of leukemia is unknown. It is not one of strict antagonism to folic acid in the leukemic cells as one cannot reverse the picture, especially of the toxic effects, by administering folic acid. They are all cellular cytotoxins of a marked degree—especially so against not only leukemic cells or bone marrow—but also cells of the mucous membranes, the G.I. tract, skin and hair. There may be even more profound involvement of which I'll speak later.

Slide No. 12. The over-all results of the therapy of acute leukemia in children may be seen in this slide. At the time this slide was made the total number of cases treated was 24. As of now we have treated 30 or so but the results remain unchanged. About 50% of the children respond to therapy with remissions and the other 50% do not. Of the 12 classified as poor results, 7 died within 2 weeks of toxic deaths. These occurred early in our use of the drug when we were somewhat unfamiliar with how toxic this drug is. These deaths for the most part occurred after 7 to 10 mgm. of Aminopterin had been administered at a dosage schedule of 1 mgm. per day. The early signs of toxicity are stomatitis, ulcerations of the lips and buccal mucosa and fever. A marked leucopenia usually follows and may reach levels of less than 1,000 and associated with this secondary infection with septicemia, pneumonia, etc., is not infrequent. One of the main causes of early death, however, is a hemorrhagic diathesis with marked bleeding from the G.I. tract with bloody vomitus and stools and also bleeding into the skin and intractable epistaxis. This hemorrhagic diathesis seems to be similar to the type seen following X-ray therapy and associated with not only a marked platelet deficit but also a plasma heparin-like substance. Autopsies performed on these cases have shown complete denudation of the epithelium of the G.I. tract and complete wiping out of the bone marrow. Secondary septicemia has been caused by a variety of organisms, but primarily the staph. aureus and B. Coli have been cultured. Therapy during this toxic stage concerns intensive supportive therapy

with antibiotics and the use of sometimes massive amounts of fresh whole blood transfusions and fluid therapy. Many of the cases can be pulled through this toxic phase but some will die despite all that can be done. On occasion we have used Toluidine blue intravenously to combat the heparin-like bleeding tendency with variable results.

Salt Pork

If recovery occurs it is almost invariably followed by a complete remission. Other toxic effects of aminopterin occurring during therapy are loss of hair, skin rashes which may be a generalized erythema or a maculopapular rash that becomes detechnial.

Three of our patients, despite continued aminopterin therapy had no change within 6-8 weeks and so therapy was discontinued. Two patients had a temporary remission but died within 6 months.

Inasmuch as leukemic patients live an average of 3-5 months after a diagnosis is made without any therapy at all, we have arbitrarily picked 6 months as the dividing line beyond which our good results have lived. We should also define a remission as many cases reported in the literature are deceptive. A remission may be clinical with improvement in symptoms and signs and well-being of the patient. It may be a partial hematological one with improvement in the peripheral blood picture or it may be a **complete** hematological remission with all signs, symptoms and peripheral blood findings normal and with bone marrow findings within normal limits or with only a very few blast cells left to be seen. Only those showing a complete hematological remission have been included in our Good Results. Of the 12 (50%) having complete remissions, 5 had more than one remission. Eight lived 6 months to one year; two lived 13 months; and two lived 19 months. Only one other case that I know of has outlived ours and that one was one of Dr. Farber's in Boston living 23 months.

Our therapeutic regime has been first of all to require hospitalization for the initial phase of treatment. This is required because of the variability of response from one child to another, and the effects of toxicity of the drug which usually requires intensive supportive therapy. We administer aminopterin by mouth 1 mgm. per day until early signs of stomatitis or other toxic signs occur. We also follow closely the blood counts, transfusing patients whose hemoglobins drop be-

low 8 Gm.% and watching the total WBC counts as an indication for suspending therapy. If the child starts out with a marked leucocytosis the drop in WBC count is convenient in regulating therapy and then we stop the drug if the count gets as low as 2,500-3,000. As many of our patients are leucopenic to begin with—or so called aleukemic—the WBC count cannot be used as a criterion so easily, but any count below 1,500 must be watched carefully. Many times bone marrow examination to determine cellularity is necessary, and certainly hypocellular marrow is a definite indication for suspension of therapy.

One fact is apparent to us—our best remissions have occurred in those patients who showed the most toxic symptoms and survived this phase—as if toxic levels were necessary to obtain before a complete remission would occur regularly. In those patients in whom we did not allow extreme toxicity to occur such as those having only simple mild stomatitis, remissions were not as regular or as complete.

Following recovery as demonstrated by peripheral blood and bone marrow findings we have found it necessary to continue aminopterin in maintenance dosages somewhat tailored to each patient but averaging 1 mgm. twice weekly. Relapses have occurred in as short a time as 2-3 weeks when no therapy was given. The maintenance dosage is regulated on the basis of weekly blood counts and any signs of toxicity.

Without exception, all reach a point where further aminopterin therapy is too toxic and yet the leukemic process continues and death ensues. At this point one may substitute ACTH or Cortisone therapy and obtain a response but this is a short one at best.

Slide No. 13. The following slides will demonstrate what results can be obtained in the therapy of leukemia. This child on admission had marked hepatosplenomegaly and lymphnode involvement with lymphedema of the lower extremities. Slide No. 14. His marrow was not typical of acute leukemia and we felt he had lymphosarcoma (biopsy) with subacute leukemia. He was given 100R X-rays therapy to the right inguinal and right cervical areas with prompt decrease in these nodes as seen—but with a rapid change in his leukemic picture to severe acute leukemia. Notice the tremendous abdomen. He was then treated with aminopterin and Slides 15 and 16 show the remarkable change. He subsequently relapsed and Slides 17 and 18 show his appearance with glan-

dular enlargement although the areas treated by X-ray never did enlarge again. He later died despite all our efforts.

In conclusion, I would like to state a few axioms about folic acid antagonist therapy. These drugs have renewed interest and efforts in research in leukemia. For the first time drugs are available which consistently can effect a complete reversal of the disease process for a variable period—and even though they do not cure the disease, they at least point the way towards the epic that someday leukemia can be cured. They have in many ways caused a reversal of our thoughts about leukemia for it seems most unlikely that a truly malignant neoplasm that is so generalized could be reversed so promptly—and further substantiates the thoughts of Dr. J. V. Cooke, my senior in St. Louis, who for 35 years or so has believed that leukemia was a metabolic disease, a defect in a maturation factor, and not a malignancy or neoplasm.

OBITUARY

WILLIAM THOMAS MOORE, age 75, Marshall, died December 25th. Born in Loughboro, Missouri, he had practiced in Boone and Searcy counties for over 50 years and was an honorary member of the Searcy County Medical Society and of the Arkansas Medical Society. He was a member of the Masonic lodge. Surviving relatives are his wife, four daughters and four sons.



IMPORTANCE OF EARLY DIAGNOSIS IN CONTAGIOUS DISEASE MANAGEMENT*

ARCHIBALD L. HOYNE, M.D.
Chicago

That a prompt diagnosis is desirable in any condition no one will deny. Yet under most circumstances if delays are injurious it is the patient alone who suffers as a consequence. But in respect to communicable diseases the situation is not the same. Failure to establish an early diagnosis may not merely deprive the patient of proper and much needed treatment but endanger others who are or have been exposed to the infection. In the home the number of contacts may be relatively few. In hospitals or institutions for children a small outbreak or even an epidemic may result because a contagious condition did not receive immediate recognition.

If an illness has not been diagnosed then it is not known whether a transferable infection is present. Therefore, in every instance the aim should be to rule out all the common contagious diseases in the case of any child who is ill disposed. This phase of the examination should have priority over all else. The adoption of such a method can easily become a routine habit which, it seems to me, is a very good one. Nevertheless it is surprising at times to find the variety of ailments that are considered without any thought being given to the one that exists.

As a preliminary examination of the patient with all clothing removed nothing is of greater importance than close observation. Is there any rash on the skin? If so what is its distribution? Is the face involved and does the eruption predominate on the trunk or on the extremities? Has the child a typical vaccination scar and are there a few old chickenpox pits on some portion of the body? The character of the eruption should also be noted. Is there a diffuse erythematous flush which fades on pressure or is the eruption of a maculopapular type as would be expected with measles. Sometimes a few petechiae about the ankles are overlooked during the early stage of meningococcaemia. Or on the abdomen, rose spots of typhoid fever may be completely ignored. And with chickenpox two or three vesicles on the back sometimes escape notice.

* Read before the Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

The foregoing comments pertain to facts in regard to which every physician is familiar; and yet merely because of insufficient thought many diagnostic errors occur. In addition to abnormalities of the skin by drawing down the lower eyelids an inspection may reveal the cherry red color of the conjunctivae which is commonly seen with measles; or the petechiae due to meningococcic infections may be present. A discharge from the nostrils, especially if of a glycerin-like type should arouse suspicion of a postnasal diphtheria. Under the latter circumstances there is likely to be some swelling of the neck which may be mistaken for mumps. If the swelling is red it is almost certainly neither diphtheria nor mumps and should it be indurated the cause is probably a streptococcic infection of one or both tonsils. If there are enlarged and tender post auricular or post cervical glands then German measles will be given immediate thought. But with a generalized adenopathy acute infectious mononucleosis, which may be accompanied by a rash, should receive consideration.

Posture also may be a helpful guide in early diagnosis. If the patient lies on the side with head thrown back there may be stiffness of the neck pointing toward meningitis. A poliomyelitis patient generally lies on the back. With the latter disease if the body is raised slowly by the shoulders the head nearly always drags on the bed or table or cannot be supported in the plane of the body. This sign, the "head drop" is not observed in a normal person who will involuntarily raise the head or even flex it on the chest. It will also be disclosed that on ventral flexion there is stiffness of the neck and back. These two signs are nearly always present in poliomyelitis regardless of whether there is any evidence of paralysis. A nasal voice, difficulty in swallowing, apprehensiveness, shallow abdominal or thoracic breathing all may suggest poliomyelitis.

Nearly all the findings mentioned thus far may be detected by the eye without disturbing the patient. Questioning is unnecessary so the age makes no difference. Moreover a history is not required for the diagnosis though it may be of great importance for the protection of others.

The throat and mouth including the tongue may be important factors in diagnosis. If the patient has a "cold" does it mean the onset of whooping cough or measles? If Koplick spots are found the decision is made. Under any circumstances isola-

tion should be required. If stenson ducts are prominent mumps may be considered.

An inspection of the tongue generally provides valuable information in cases of scarlet fever. During the first 24 hours of the rash there is a coating with enlarged papillae showing—the strawberry tongue. And this picture is sometimes seen before the eruption appears on the skin. By the second day of the rash the coating is likely to be gone from the tip and margins and by the end of the third day the tongue looks red and clean with papillae elevated—the raspberry tongue. Regardless of any history to the contrary the scarlet fever patient with a raspberry tongue may be assumed, with a high degree of certainty, to have "broken out" at least three days previously; it may be a still longer time. With a fairly accurate date of onset one will then have more reliable information concerning exposures than is likely to be provided by the parent.

A strawberry and raspberry tongue is frequently seen with measles. However the distribution and character of the rash generally prevent confusion. As a rule there is no eruption on the face with scarlet fever but merely a flush with circumoral pallor. With measles the facial eruption involves the border of the lips.

No reference has been made to laboratory procedures which should be utilized to the fullest extent to confirm the visual diagnosis. But a laboratory diagnosis may require considerable time. Therefore the need for a prompt decision must be constantly emphasized. On this one point may depend the success or failure in the proper management of the acute infectious diseases.

If the customary physical examination fails to reveal conclusive findings it should not be forgotten that no examination is complete without investigating the nature of the cerebrospinal fluid. An infant may have an extensive meningitis and yet no neurological signs. Even bulging or tenseness over the anterior fontanelle may be absent. Fever, anorexia and perhaps either stupor or irritability may be the only symptoms.

Even with a meticulous system of medical asepsis in a children's ward the threat of measles and chickenpox cross infections is ever present. In either instance isolation of the patient is necessary and also closure of the ward to new admissions unless known to be immune. It would also be advisable to give all non-immune contacts

2 c. c. of gamma globulin intramuscularly. Children so treated ought not to be held in the hospital for the expiration of the incubative period of the disease concerned. If they have recovered from the condition for which they were originally admitted they should be released to their homes. However the parents should be acquainted with the facts pertaining to exposure. Should the discharged patient develop a contagious disease later and transmit it to a well sibling the consequences are not likely to be as serious as if the child had remained in the hospital and endangered many who were already ill.

In earlier days it was often felt that all acute infectious disease patients should be treated in special hospitals. England was probably the pioneer in seeking that aim. In later times there has been a marked change of opinion. Even years ago statistics prepared in England tended to prove that when acute infectious disease patients were herded in special hospitals the percentage of complications was greater than when home care was provided. Many believe now that the large contagious disease hospital operated as an independent unit is no longer justified. More recently some physicians have encouraged the general hospitals to admit acute infectious disease patients who require hospital services.

The sharply lowered incidence for practically all the acute infectious diseases, with the exception of poliomyelitis, has allowed a surplus of beds in contagious disease hospitals. Furthermore the general reduction in severity of infections has diminished requests for hospitalization. Each of these two factors plays a part in curtailing the year round occupancy of special hospitals. At the same time the percentage of acute infectious disease patients cared for in their homes has undoubtedly increased. However, it is likely that there will always be unusual examples which will require hospitalization. A ruptured appendix as a complication of measles or chickenpox is not extremely rare. The preservation of life in cases of diphtheria, poliomyelitis or *Hemophilus influenzae* infections may depend on a tracheotomy. Rarely gangrene occurs in scarlet fever or meningococcaemia. And for infants with whooping cough it is scarcely possible to equal the facilities which a hospital can furnish.

If confronted with one of the foregoing problems how can a physician secure for his patient the life saving services demanded if there is no isolation hospital in his community? The New York State Department of Health has recommended the proper answer to that question. For

several years it has advocated that the general hospitals open their doors to the common contagious diseases. The inconsistencies of general hospitals are often readily apparent. For example, scarlet fever or erysipelas is not admitted but patients with acute follicular tonsilitis, acute pharyngitis or streptococcal sore throat are likely to be welcomed. Nevertheless the same type of hemolytic streptococcus may be the incitant in each disease. Moreover the pneumonias and influenza are accepted without question whereas mumps and whooping cough are regarded as hazards to other patients. But in a general hospital the majority of patients are adults not susceptible to the common contagious diseases because they have experienced them during childhood. Therefore with proper isolation in a general hospital there should be less opportunity for cross infections to develop than in a contagious disease hospital where most of the patients are children.

Outside of isolation hospitals, poliomyelitis usually inspires great fear. General hospitals as a rule refuse to admit such patients during the acute stage or until the isolation period established by the state has expired. Nevertheless during nearly forty years there has never been a member of the personnel of the Cook County Contagious Disease Hospital, nor any patient there who has ever contracted poliomyelitis. Moreover there is no evidence that compulsory isolation is an effective measure for controlling the disease. But it is the writer's opinion that every case or suspected case of poliomyelitis should be sent to a hospital if such action is possible. By adopting that plan a two-fold purpose is accomplished. (1) First an accurate diagnosis can be established because of the available facilities which are not apt to be at hand in the home; and (2) second the course of the disease cannot be foretold at time of onset. Either a tracheotomy or a respirator may suddenly become necessary to preserve life.

The epidemiology of meningococcal meningitis is similar in many respects to poliomyelitis. It is uncommon to diagnose more than one case in a household although others may be infected with the causative organism. Furthermore it is not likely that the disease is transmissible 36 to 48 hours after adequate sulfonamide therapy has been instituted. There seems to be no doubt that patients with meningococcal infections can be treated in general hospitals without danger to others if reasonable medical aseptic precautions are taken.

Although this discussion pertains primarily to diagnosis the relationship to treatment may be

mentioned. Is it proper to prescribe one or more of the sulfonamides and perhaps several of the antibiotics before a diagnosis is determined? In reality it is sometimes true that although the diagnosis was wrong it transpires eventually that the treatment was correct. Of course that can happen because of the versatility of some of our modern drugs. However, there are dangers and definite contraindications to the haphazard use of sulfonamides and antibiotics. If sulfonamides are given for every minor illness it cannot be expected their effectiveness will be of the greatest when used against some serious infection at a later time. Although penicillin causes occasionally unpleasant reactions its use can nearly always be justified as a prophylactic if not as an indicated remedy for the existing condition. An example is its common administration to patients with bulbar or respiratory poliomyelitis for the purpose of warding off pneumonia.

Streptomycin therapy when applied to infants can lead to disastrous consequences. If the 8th nerve is affected and the child survives it may grow up not only totally deaf but a mute as well. Strangely enough in tuberculous infections streptomycin seldom seems to injure the hearing.

When a sulfonamide and penicillin are given together their action is often believed to be synergistic. Such is not the case, however, when some of the antibiotics are combined. On the other hand it has been pointed out that the effectiveness of penicillin in treating certain infections is enhanced by the addition of streptomycin. However, it appears that when penicillin and chloromycetin are given in combination that they are antagonistic. The foregoing fact suggests the advisability of careful consideration prior to the administration of any combination of drugs. An early diagnosis should lessen the possibilities of needless medication.

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UNEXPLAINED FEVER IN INFANTS AND CHILDREN*

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Few pediatric problems stimulate greater interest to the physician and challenge to diagnosis than those characterized principally by unexplained fever. In most instances obscure fever has its origin in disorders which either are relatively acute and self-limited, or which soon develop characteristic clinical and laboratory findings. Fever may occasionally exist, on the other hand, for weeks, perhaps months, without yielding objective clues as to its origin or means for effective therapy.

The red line on the thermometer, as pointedly emphasized by Poncher,⁽¹⁾ may be so fixed in our approach to problems of fever that the normal variability in body temperature is frequently disregarded. It is important to stress that normal diurnal deviation in body temperature, although its features are well known, may on occasion be the sole factor responsible for prolonged restriction of a healthy subject's physical activity. Significant rises in body temperature for thirty to sixty minutes may similarly occur in normal children following exertion and exercise.^(2, 3) Thus, for greatest accuracy, body temperature should be recorded at least thirty minutes after any degree of strenuous activity and, in addition, during periods of fasting.⁽¹⁾ It is further apparent that rectal temperature readings are most reliable,⁽¹⁾ particularly when the thermometer is inserted for a distance of 5 cm. (2 inches) and left in place for at least 3 minutes.⁽⁵⁾

Fever ordinarily is the result of an imbalance between those physiologic factors which normally control heat production and heat loss.⁽⁶⁾ Therefore, extreme deviation in body temperature of infants, in whom temperature control is at best imperfect, is not uncommon. A well-recognized cause of sustained fever in infancy,⁽⁷⁾ for example, occurs during humid summer months as a result of impaired elimination of body heat when skin evaporation is inadequate. This is particularly prone to occur in institutionalized infants, especially in those with cerebral defects, when the mean atmospheric temperatures reach 90°F. or above. Very high fever may develop in infants with con-



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genital ectodermal dysplasia who, because of absence of sweat glands, are incapable of normal skin heat loss. Erratic and unexplained fever may appear in infants who, because of an apparent congenital renal defect in tubular reabsorption of water, are subject to intense bouts of anhydremia and dehydration,⁽⁸⁾ not unlike that associated with marked loss of body fluids or diabetes insipides.

The occurrence of transient fever on the third or fourth day of life, when weight loss is physiologically maximum, is well known. Holt⁽⁹⁾ initially described this as "inanition fever," thus ascribing it to starvation. Later Bakwin⁽¹⁰⁾ reasoned that so-called "transitory fever" was due to dehydration and diminished plasma volume which accounted for decreased elimination of body heat.

It is of major importance, on the other hand, to emphasize that fever during the first few days of life may have its origin in obscure neonatal sepsis or intracranial hemorrhage. The great majority of infants with subdural hematoma, as noted by Ingraham and Matson,⁽¹¹⁾ exhibit fever at some stage of the condition.

Acute Infections

Acute infectious disorders, whose underlying nature in most instances is soon revealed in the upper respiratory tract or gastrointestinal tract are by far the most frequent causes of rapid and occasionally striking increases in body temperature. Fever of acute origin may in some cases be obscure when thorough clinical evaluation has been omitted. An auditory canal impacted with cerumen precludes visualization of an underlying acute otitis media. Early pneumonitis may be strongly suspected by a rate of respiration increased out of proportion to the cardiac rate, particularly when accompanied by slight expiratory grunt. Acute fever of undisclosed origin in children especially in females suggests strongly the possibility of urinary tract infection. Absence of positive clinical findings further supports the possibility of urinary tract infection in that frequency of urination, for example, may particularly be uncommon. Recognition of the common febrile exanthema is ordinarily not difficult except during the pre-eruptive period, of Roseola Infantum (Exanthem subitum) when an imposing number of different diagnoses may be considered. It is also of interest that one to four days of fever without apparent cause may precede the appearance of acute gingivostomatitis.⁽¹²⁾

Remittent septic fever, acute in onset, is commonly associated with purulent bacteremia and its metastatic complications of meningitis, osteomyelitis and perinephric abscess. Typical meningitis is not difficult to diagnose although this is not invariably true in early phases of tuberculous meningitis, or purulent meningitis in infants. In the latter, signs of meningitis may be few—unwarranted irritability, unexplained pyrexia, and perhaps slight tenseness of the anterior fontanel. Clinical awareness of a typical signs of meningitis and early examination of the spinal fluid cannot be over-stressed as a diagnostic procedure in the small infant with unexplained fever.

Chronic and Recurrent Infection

In any consideration of unexplained fever, particularly when prolonged over a week or more, Keefer⁽⁶⁾ has emphasized that such features as geography and the prevalence of certain diseases in a community be carefully taken into account. This is significant when certain geographic areas tend to be endemic foci for disorders such as malaria, Brucellosis, endemic typhus fever, and Rocky Mountain Spotted Fever. Thus, these conditions tend to be obscure fever problems when their occurrence is elsewhere sporadic, but nevertheless deserve consideration in the differential diagnosis.

It is not of infrequent occurrence, however, to note that any one or more of the above mentioned infectious diseases, as well as infectious mononucleosis, tuberculosis, or typhoid fever, are likely to be given priority as the probable cause for undisclosed fever. The importance of such diseases as cause for fever should not be underestimated. Yet it is significant, on the other hand, to emphasize the fact that prolonged episodic fever, even continuous, low-grade fever in many instances can be explained by infection in the upper respiratory tract.

Similarly, continued intermittent fever brings to mind possible retention of undetected purulent material, particularly when a significant polymorphonuclear leucocytosis exists. Signs of appendiceal, retropharyngeal, and subdiaphragmatic abscess, or amoebic abscess may elude diagnosis unless careful clinical search is carried out. In particular, the presence of repeated urinary tract infection not uncommonly suggests congenital obstruction of the genito-urinary system and retention of pus.

When extended, low-grade fever is attributed to active but atypical rheumatic fever, clear-cut

diagnosis may be extremely difficult. Characteristic arthralgia, subcutaneous nodules and changing cardiac murmurs may be absent. Probable solution lies only in prolonged but careful observation of the heart, particularly noting poor quality of the apical first heart sound and sinus tachycardia out of proportion to the degree of fever. History and findings of acquired or congenital heart disorder on the other hand, in a patient with prolonged fever, particularly with refractory anemia and leucocytosis and when unexplained for reasons already considered, may lead to the diagnosis of subacute bacterial endocarditis.

Non-Infectious Fever

Failure to confirm presence of infection by diagnostic means currently available should stimulate clinical and laboratory study for obscure malignancy. Wilm's tumor and adrenoblastoma may, for example, evade early recognition, yet be a seeding focus for pulmonary and skeletal metastases. Leukemia may simulate the clinical picture of rheumatic fever and early rheumatoid arthritis with its characteristic low-grade fever, anemia, pallor and tenderness in extremities. In unusual instances prolonged fever may be the only manifestation of leukemia before its demonstration in the peripheral blood film or even in the bone marrow. In one case seen in our clinic, daily remittent fever up to 104°F. persisted for eleven months before clinical or hematologic signs of lymphatic leukemia appeared. The patient subsequently survived an additional nine months before death occurred. It is of considerable interest that of twenty-three children with Hodgkin's disease, Smith⁽¹³⁾ noted four cases with daily remittent fever lasting over a period of months, sometimes merging into the typical Pel-Ebstein fever picture. In one instance he described a daily swinging fever which was first noted in a child at seven years of age. Nine years later, three months before his death, the temperature curve assumed a characteristic Pel-Ebstein configuration.

Exceedingly prolonged periods of fever, as pointed out by Schlesinger⁽¹⁴⁾ may in addition precede the clinical manifestations of rheumatoid arthritis in children. Initially fever may be prolonged and intermittent or exceptionally high and irregular, then giving way to periodic attacks of fever. Eventually episodic fever ceases, and a typical picture of rheumatoid arthritis remains. In 1930, Bilderback⁽¹⁵⁾ reported a six-year-old patient who, after fever for two and one-half years, developed arthritic manifestations. Gепpert⁽¹⁶⁾ has observed a child for nearly five years

with cyclic episodes of undiagnosed high fever who recently at six years of age demonstrated clinical and roentgen signs of rheumatoid arthritis. In some cases, however, when fever is of more than one year's duration and when the diagnosis consistently remains in doubt, the patient's prolonged course may eventually terminate with findings of arthritis, nephritis, skin manifestations and occasionally pericarditis, namely disseminated lupus erythematosus or polyarteritis nodosa.

In an apparently healthy pediatric subject, in whom all causes for unexplained fever fail to be demonstrated by the usual means, the possibility must be considered that elevations of body temperature can be ascribed to emotional upsets. Minor elevations in fever are not infrequently seen in a child following fear and excitement, or when he is hospitalized for an elective surgical procedure. In latter instances such transient bouts of fever disappear when, after the surgery is cancelled the child returns home. Bakwin⁽¹⁷⁾ has pointed out that "school fever" may occur in children who find the school situation unpleasant. It is reasonable to assume that so-called psychogenic fever may occur in basically nervous children, particularly when this tendency is accentuated by an over-anxious mother who takes the temperature several times daily.

Diagnostic Aids

Whenever the diagnosis of unexplained fever is not definite, the proper selection and performance of necessary laboratory procedures is of great assistance in the clarification of many baffling conditions. Similarly, valuable laboratory adjuncts may lead to the use of certain therapeutic methods which otherwise might not have been considered. Initial laboratory tests should be those of a comparatively simple nature, the most useful immediate studies being the total leucocyte count and its differential, a catheterized or clean-voided urinalysis, and erythrocyte sedimentation rate. The most conclusive evidence, on the other hand, of obscure types of infectious disease lies in demonstration of the causative organism from the blood stream or site of infected tissue either by stained smear, bacteriologic culture or animal inoculation. Considerable important evidence may be obtained indirectly by the development of positive diagnostic skin tests or by increasing titers of positive agglutinating and complement-fixing tests. Histologic examination, and perhaps bacteriologic culture, of biopsied bone marrow and lymphoid tissue are useful adjuncts, particularly in instances of prolonged, undisclosed fever.

Evidence of metastatic dissemination of malignant disorders may be manifest by roentgen examination of the skeletal and pulmonary structures.

Summary

The problem of unexplained fever not infrequently can be converted into a relatively simple one by thorough clinical evaluation of the patient and performance of properly selected laboratory procedures. Normal physiologic variability in body temperature should be considered in the approach to patients with fever. Causes of unexplained fever commonly encountered in the pediatric subject are reviewed.

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IMMUNIZATION OF CHILDREN*

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The medical profession has had ample experience with smallpox and whooping cough vaccines and diphtheria toxoid to permit the conclusion that when two-thirds or more of the children in a community are inoculated with these antigens during the first year of life, the corresponding diseases virtually disappear from the community. All children should have these inoculations. Recently, a fourth has been added to this group, namely, inoculation against tetanus. This disease falls in a somewhat different category in that it is a menace to the individual but not to the community. Therefore, public health practices have not included tetanus in a list of "must" inoculations. In addition to these three or four diseases for which we have proved active immunization, there is a somewhat larger list of conditional immunizations depending upon time and place. For example, in many parts of the country use of typhoid vaccine is not infrequently demanded by certain special conditions. I suspect that there are few areas where this vaccine is routinely given. There are parts of the world where yellow fever vaccine, typhus vaccine, plague, cholera, dengue fever are employed and we are told dysentery vaccine is now beginning to be used. Persons traveling into certain sections of our own western states may need to be immunized against Rocky Mountain spotted fever. It is of interest to note that certain new vaccines are being added to our armamentarium from time to time. Recently, a vaccine made of the virus of mumps has become available. It is not suggested that it be used routinely in children but at the present time it probably has the greatest value in immunizing the teen age male who has not yet had the disease.

Influenza vaccine has also become available and has had fairly wide use just recently in connection with the outbreak of influenza in different parts of the country. This vaccine may be used for children as well as adults, though, as will be stated later, it is likely to cause rather severe reactions in children and the dose needs to be reduced much more than is customary for other vaccines.

With the exception of smallpox vaccination, active immunization against disease by means of vaccination or inoculation is strictly an accomplish-

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ment of medical science during the present century. In fact, most of the progress has come in the past thirty years. Diphtheria immunization was practiced using toxin-anti-toxin mixtures as early as 1912 or 1913. It has been known for nearly thirty years that the child or adult could be given more than one vaccine or antigen simultaneously and would react in a specific manner to each component of a mixture of antigens. However, it is only in the past ten years that double and triple combinations of antigens have come into wide use. At the present time there is a tendency for more and more physicians to use combinations of diphtheria and tetanus toxoids, often with the addition of pertussis vaccine, so as to form a triple antigen. The vaccines themselves have undergone considerable improvement during the past twenty years. The various antigenic components within the vaccine have been purified and in many instances it has been possible to get rid of inert material which was not important antigenically, but might be the cause of untoward reaction. Also, antigens have been combined with substances such as alum or aluminum hydroxide to slow up absorption of the active principal from the site of injection and bring about a longer and more effective stimulation of antibody production on the part of the person injected.

Time to Begin Immunizations

There was for some years a discussion as to the optimum time to begin routine inoculation of children. It was thought formerly, that children shared with other species an inability on the part of the very young to produce antibodies efficiently. Many of us were taught to withhold immunization against diphtheria, for example, until the child was 7 or 8 months of age, the idea being that the child of 2 or 3 months of age did not produce antibodies nearly so well as the older infant. Thanks to the work of Sako and several others, this has been to a great extent disproved. It is true that the very young of several animal species, including man, does not produce antibodies quite so readily as the slightly older member. However, it has been amply demonstrated that by three months of age the infant is capable of responding to the injection of whooping cough vaccine or diphtheria toxoid with adequate production of antibodies. This point is mentioned because it is desirable to start immunization against whooping cough as early as possible. This disease has been brought under pretty good control in those communities where a high percentage of young children have been given inoculation of

pertussis vaccine. However, the disease is by no means eradicated in any area and is still a definite threat to our children. Whooping cough causes more deaths, as everyone knows, than scarlet fever and diphtheria combined. In years gone by, of course, the reverse was true. It is the very young infant which is most in danger from whooping cough. There is need, therefore, to immunize infants as early as possible, if we are to achieve best results in reducing mortality chargeable to whooping cough which has in past years amounted to several thousand infant deaths annually. I believe it is fair to say that it is the consensus of those who have done most work in this connection that it is quite safe and, indeed, recommended to begin the immunization of infants at three months of age. Whooping cough vaccine can be given alone at this time or it can be used in combination with diphtheria and tetanus toxoid, this latter combination known popularly as "triple vaccine" and has recently come into quite wide use.

Interval Between Injections

Some discussion of the interval between the injections of vaccine is indicated. When immunizations were begun at 7 months, it was customary to give pertussis vaccine at weekly intervals until the 3 to 6 doses had been given. This short interval has been largely abandoned for an interval of at least one month between injections. It should be noted that the longer the interval between injections, the higher the antibody response. This holds true up to 3 months at least. However, if intervals longer than one month are used, the whole purpose of early injection will be nullified in that the patient will be under possible exposure to whooping cough for several months before his immunization takes effect. There is probably little or no effective protection from the first injection of whooping cough vaccine. There is good protection, of the order of 80 or 90%, within a month after the third of 3 monthly injections have been given. Therefore, we cannot count on the child being definitely protected against whooping cough until he is 7 months or so of age, even when we begin the injections at 3 months of age. When injections are begun as early as three months of age, and certainly if they are begun earlier than this, it has been recommended that an additional or fourth injection be given toward the end of the first year so as to give an added stimulus and overcome any deficiency in antibody production which might have been caused by the very early administration of the vaccine.

It is no longer necessary to begin immunization against diphtheria as early as 2 or 3 months in most communities because the disease is so well under control that the child is not in any great danger if his immunization is delayed until he is 5 or 6 months of age. However, when triple vaccine is used diphtheria immunization occurs simultaneously with whooping cough immunization. The same is, of course, true of immunization against lockjaw when tetanus toxoid is included as the third member of a triple vaccine. There does not seem to be anything new concerning smallpox vaccination. As a matter of fact, with the exception of certain improvements in production techniques which permits the production of an uncontaminated vaccine, we have made very little improvement over Jenner who introduced the modern principle of using cowpox to immunize against the allied but by no means identical disease, smallpox. In this connection it should be remarked that immunization against smallpox before the end of the first year of life seems desirable from several standpoints. Reactions of a serious nature following smallpox vaccination are very rare today. Almost never does one see the severe staphylococcic or streptococcic infection which by report was a common complication of vaccination two or three generations ago. Post vaccinal encephalitis is reported occasionally but so far as I know, it has not been reported in a child under one year of age. This fact, together with the pressure from Public Health authorities to get all of the population inoculated against smallpox, seems sufficient reason for the usual recommendation that all children be vaccinated before their first birthday. If vaccination is repeated thereafter at 5- to 10-year intervals, immunization against smallpox will be kept at a very effective level. If 20 or more years elapse between vaccination, the subject may get a primary vaccinia following subsequent inoculations in all respects comparable to that following the first inoculation. Most failures of smallpox vaccination to "take" are due to one of two factors. Either the vaccine has been allowed to stand too long in the physician's office or elsewhere and has become impotent or dead. Smallpox vaccine (cowpox vaccine) is a living virus suspension and is entirely ineffective once the virus has died, as it will do in a matter of a few hours stored at room temperature. The second cause of failure of vaccination often relates to the use of alcohol or other antiseptic solutions to prepare the skin for the vaccination. Ethyl ether is undoubtedly the best substance to use for removal of foreign material and sebaceous secretions from the skin before

vaccination is done. Following use of ether, which evaporates almost instantly, the drop of vaccine should be placed on the skin and multiple punctures made through the drop of vaccine. The punctures may be made in a space within a radius of one or two millimeters with a resultant "take" which is in all respects as effective as that which followed the old practice of scarifying the skin over a much larger area. The latter practice resulted in a large and unsightly scar following the vaccination. It is recommended that children be vaccinated on the arm approximately at the insertion of the deltoid muscle. Vaccination on thigh or buttocks is not recommended in infancy because it is an area of high degree of skin contamination and also it is a site readily within the reach of a child's fingers and may be scratched and contaminated.

The site of injection and the technique of administration of pertussis vaccine and diphtheria and tetanus toxoid deserves some discussion. In children of school age, diphtheria toxoid may be given in the arm in the deltoid or triceps area. Many physicians also give these injections and pertussis vaccine also in the arm in infants. I believe that there is a better and safer area for these injections, namely, the lateral aspect of the thigh. This area presents a large mass of tissue with almost complete absence of large blood vessels or nerve trunks immediately beneath it. I have used this area for a number of years without any untoward reaction of any kind. I have known of instances where injection of 1 cc. of mixed vaccine in the arm has been followed by an alarming reaction and a temporary pseudoparalysis, presumably due to the development of neuritis.

Insofar as the technique of administration is concerned there is one small point worth mentioning. If the vaccine is given by deep subcutaneous injection, the likelihood of sterile abscess or bothersome local reaction is greatly minimized. At one time it was thought that superficial injection of the vaccine was desirable because it slowed up absorption of the antigen and, therefore, resulted in a higher level of antibody production. This has largely been discounted and there is no question that superficial injection of toxic substances such as vaccines will undoubtedly result in a higher percentage of bothersome local reactions including sterile abscesses. Some have recommended that these vaccines be given by intramuscular injection but I think it has not been proved that this offers an advantage in the matter of antibodies produced following the injection. As a matter of fact, too rapid absorption of the

antigen from the site of injection would cut short the stimulus to antibody production and result in lower levels from the same amount of antigen. It is worth mentioning that subsequent injections of vaccine should never be given at exactly the site of a previous injection. To do so invites a much sharper local reaction than would otherwise be noted.

Reactions to Immunizations

There is, of course, always some local reaction when a vaccine is injected. This reaction should be explained to the parent and it should be made clear that local redness and swelling is to be expected and is not significant unless unduly severe. It might be well to mention here that aspirin is definitely more effective than phenobarbital in controlling those reactions which are sufficiently severe to cause the child to be fretful and sleepless. Many physicians regard phenobarbital as an analgesic which it is not. It may solve the problem of a sleepless child in some instances, but it is also likely in others to bring about a confused semi-delirious state which is very troublesome to deal with. Administration of 1 grain of aspirin once or twice during the evening or night following the day of injection is usually all that is needed for the child under one year of age. In the vast majority of instances no medication of any kind is needed.

Before leaving the subject of active immunization of children, two or three special problems should be touched on briefly. One of these relates to the use of scarlet fever immunization. There has been available for many years an antigen known as the Dick Toxin and this has been used particularly in institutions for active immunization against scarlet fever. Five or six injections of the antigen were needed to complete the course of immunization and the reactions were often rather severe. Many physicians have felt the long course of injections, the relative frequency of sharp reactions together with the fact that the immunization is against the toxic phase of scarlet fever principally, renders the routine use of scarlet fever immunization with the Dick toxin not worth-while. Recently a new type of antigen has been made from toxin produced by strains of streptococci which have been demonstrated to cause clinical scarlet fever. It is possible now to immunize a child with three or four intradermal or subcutaneous injections by the modified toxin without the production of unusually severe reaction. The argument as to whether or not immunization protects against the bacterial infection, the sore throat, the sinusitis, and other phases and

complications of scarlet fever due to bacterial invasion is not settled. Many think that it does not, and the new type vaccine has not come into routine use in most areas. It has, however, been used for immunization of student nurses and hospital personnel where the exposure to scarlet fever is likely to be frequent and where occurrence of the disease brings about considerable disruption of class schedules, care of patient, etc. We¹

¹ MacKaye, L. G., and Watson, E. H., *Am. J. Dis. Child.* 74: 711 (Dec.) 1947.

have had no case of scarlet fever among our student nurses at Michigan since beginning immunization of all Dick positives four years ago. Scarlet fever is relatively mild at the present time and effective chemotherapy or anti-biotic therapy is readily available. For this reason there is no great demand for active immunization against this disease at the present time.

Use of BCG (bacillus of Calmette-Guerin) to actively immunize persons who have not yet had tuberculosis, but are likely to come in contact with it is increasing in this country. In Europe and South America use of BCG vaccine has been extensive during the past twenty years. Its use in this country has been restricted largely to student nurses, medical students, and to certain Indian populations where tuberculosis rates were very high. Under these circumstances it appears to offer considerable protection against the disease, tuberculosis. The National Institutes of Health have recently licensed a producer of BCG vaccine, and it seems likely that it will come into somewhat wider use in this country. I believe that it may have a considerable value for immunization of infants and small children who have not yet contracted tuberculosis, but who will be brought up in families in which there is known to be a considerable amount of the disease.

The "Booster" Principle in Immunization

Knowledge of the mode of action of the "booster phenomenon" and its uses in practice should be widespread. When an individual has been injected with a vaccine, he elaborates antibody against that specific antigen. Following the initial injection it takes time, often as much as several weeks for the antibody level to become sufficiently high to be protective. However, when the same antigen is readministered after a lapse of some months or years the body produces antibody at a greatly accelerated rate. The second injection or "booster" injection may bring about an antibody level equal to or surpassing the initial level all in a matter of a few days as contrasted to the several weeks which was necessary for the

body to react to the initial stimulus. The use of this knowledge in protection of the individual against tetanus is well established. During World War II all military personnel was actively immunized against tetanus, and this immunization was maintained at good level by booster injections, usually at yearly intervals. However, when an injury was sustained the subject was given a booster injection of tetanus toxoid and it has been demonstrated that under these conditions there is a very noticeable increase in antibody titre in a week or less. As a matter of fact, it can be shown by serum antitoxin determination that the person who is actively immunized against tetanus and is given a booster injection of tetanus toxoid at the time of injury is probably in considerably better position so far as antibody level is concerned than if he were given 1,500 or 3,000 units of tetanus antitoxin as a prophylaxis against the development of lockjaw. The latter procedure, has, of course, been traditional for many years and still should be used in all instances except where the injured subject is known to be actively immunized against lockjaw within the last five years, in which case a booster injection of tetanus toxoid will be sufficient for all except the most badly contaminated wounds.

It has been observed that as long as five years following the initial immunization against tetanus, the body retained a certain amount of "know-how" which permits it to react quickly to a subsequent reinjection or booster dose of tetanus toxoid. As a matter of fact, for minor illnesses it is possible that the injury itself might act as a booster to the immunization, provided, of course, tetanus spores found their way into the wound at the time of injury. It is not recommended that the booster dose be omitted except in those cases where such an injection has been given within a few months of the time of the injury in question.

The principle of the booster injection can be applied to diseases other than lockjaw. The army now uses an annual injection of typhoid vaccine rather than the three injection course at three-year intervals formerly employed. If diphtheria or whooping cough becomes prevalent in a community, children who have been immunized against these diseases some years previously may be given a single injection of corresponding antigen as a reactivating or booster injection.

Passive Immunization

The development of effective chemotherapy and antibiotic therapy has practically removed the need for certain antitoxins and antiserums with which passive immunizations may be

achieved. The outstanding example, of course, is pneumococcic pneumonia. Also, scarlet fever antitoxin has largely fallen into disuse as a prophylactic, and is rarely needed any more even in therapy. Tetanus antitoxins still must be used in all instances of contaminated wounds where the patient has not been previously immunized against lockjaw.

Two serious diseases of childhood are amenable to the use of antiserums. These are whooping cough and influenzal meningitis. In the former antiserum may be used, either to prevent or to treat the disease. Two sources of human antiserum which contains a high level of antipertussis antibody are the Philadelphia Serum Exchange and Cutter Laboratories in California. We have been using antiserum from one or the other of these suppliers for five or six years. It has its greatest use in the infant of a few months who contracts whooping cough, usually from an older sibling. Mortality rate from whooping cough in years gone by has been as high as fifty to seventy-five per cent in infants under six months of age. This can be reduced materially by the use of specific antiserum and the use of antibiotics, chloromycetin is perhaps as effective as any other against H-pertussis infection. Rabbit antiserum against H-pertussis infection is also available and should be used if the human antiserums are not immediately obtainable.

Schedule of Immunization

Physicians who immunize children have worked out schedules of immunization which seems to them to meet the child's needs. As stated above, whooping cough has, by virtue of the partial control of diphtheria, scarlet fever, smallpox, and the elimination of certain other diseases, come to be the most important communicable disease in early childhood. It is necessary to immunize children as early as possible, if they are to receive maximum protection against whooping cough. It is impossible to be dogmatic about the exact time when immunization against whooping cough should be started. What is desired is to achieve the best compromise between immunization which is too early and, therefore, not as effective as it might be, and immunization which is started so late that it does not offer much protection during the time when the child is most likely to die of whooping cough should he contract it. Many feel that three months of age is the proper time to start whooping cough immunization, as will be seen by the accompanying table. The interval between injections has been arbitrarily set at one month. The final antibody level would be higher

if the interval were two months or three months. But to select such a long interval between injections would unduly prolong the time at which full immunization would be realized. Injection of vaccine at the third, fourth, and fifth months results in a very definite amount of protection as early as the sixth or seventh month. We have adopted the policy of giving a fourth injection which may be called a booster injection at twelve months of age. I feel, therefore, that our schedule really calls for four injections of vaccine to be given one each, at the third, fourth, fifth, and twelfth months. The child should have subsequent booster injections of diphtheria and tetanus toxoid. There is some question whether or not boosters of whooping cough vaccine should be given after the second year. Of all of the vaccines used, whooping cough seems to be the most dangerous from the standpoint of possibly causing encephalitis. The work of Toomey² indicated that postvaccinal encephalitis was most likely to follow pertussis immunization; when it occurs it is a very damaging affair. Children beyond the age of two years are not likely to die of whooping cough should they contract it. This is particularly true if they have been immunized earlier. Therefore, I think it may be said that the increased danger of postvaccinal encephalitis argues against the use of pertussis vaccine in the older pre-school child. This point is by no means settled. I simply state my own views.

AGE	ANTIGENS	REMARKS
3 mo.	Triple vaccine (alum) Diphtheria tox. Tetanus tox. Pertussis Vac.	.5 cc or 1.0 cc depending on product used.
4 mo.	Triple vaccine (alum) Diphtheria tox. Tetanus tox. Pertussis Vac.	.5 cc or 1.0 cc depending on product used.
5 mo.	Triple vaccine (alum) Diphtheria tox. Tetanus tox. Pertussis Vac.	.5 cc or 1.0 cc depending on product used.
6-12 mo.	Smallpox Vaccination	
12-18 mo.	Triple vaccine as above also tuberculin test.	Booster injection.
3 years	Diphtheria and Tetanus Toxoids.	Second "booster dose."
5 years	Diphtheria and Tetanus Toxoids.	Repeat booster dose Repeat tuberculin test Repeat smallpox vaccinations

When the first booster injection is given at one year of age it is desirable, I think, to give another booster injection of diphtheria and tetanus toxoid at approximately thirty-six months of age. Another booster injection with these two antigens should be repeated just before the child enters school. There is no general agreement on the

²Toomey, J. A., J.A.M.A. 139: 448 (Feb. 12) 1949.

use of booster injections after the fifth or sixth year. If tetanus immunization is to be kept at a useful level it seems that an injection of tetanus toxoid should be given at two- or three-year intervals. Use of the Schick test in large numbers of young adults as occurred during World War II and as is practiced among student nurses and medical students in our schools of Medicine and Nursing indicate that approximately one-third of young adults may have a positive Schick test and hence be theoretically susceptible to diphtheria. This would argue for use of a booster injection of diphtheria toxoid in the older child, but just what schedule of immunization should be employed is by no means clear.

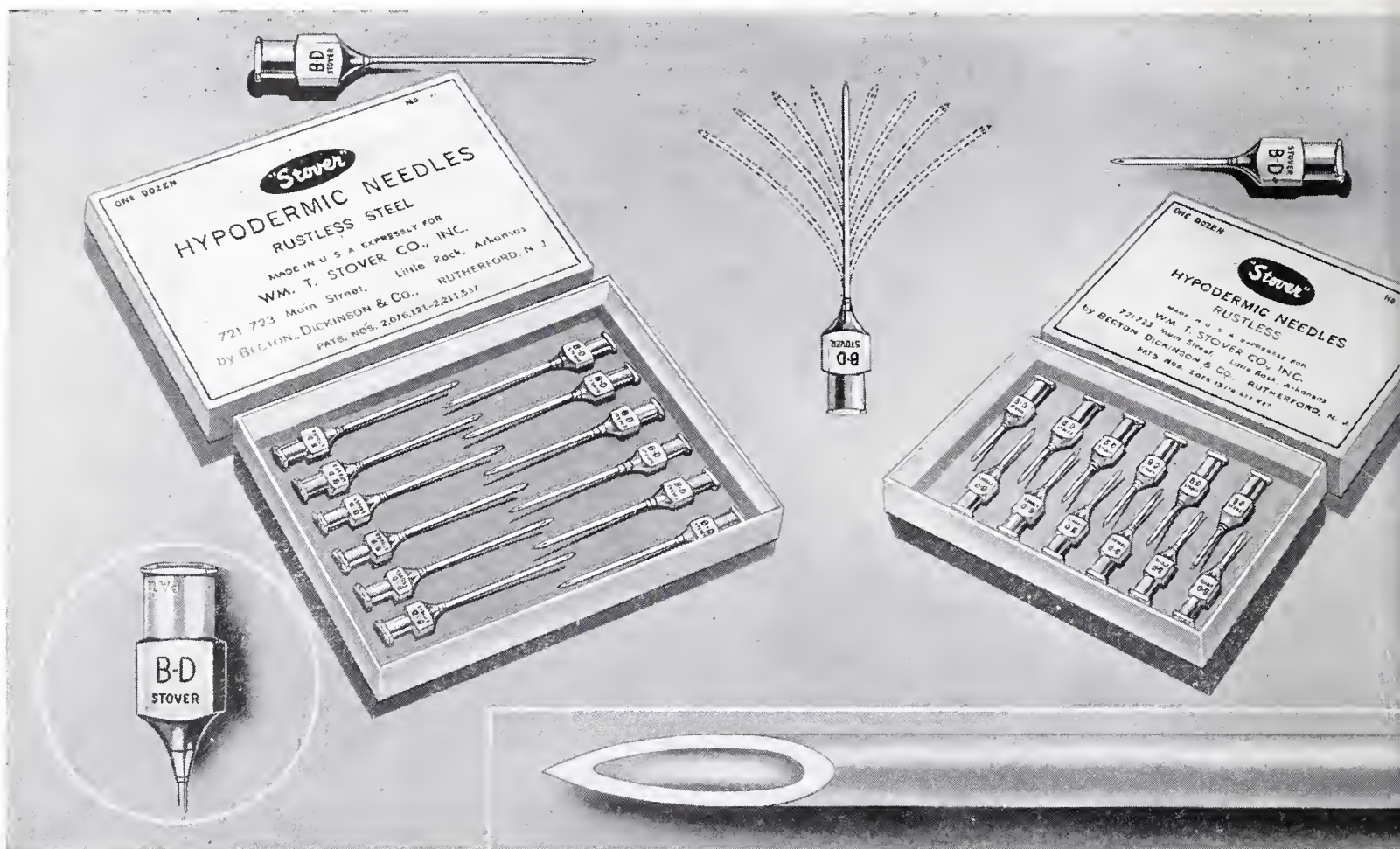
The Schick Test

For the pre-school and school child, pediatricians have tended to use the Schick test less and less and to substitute for it an injection of diphtheria toxoid, either alone or in combination with other antigens. It should, of course, be kept in mind that the child beyond six or eight years of age may react rather violently to diphtheria toxoid and the stimulating dose should be kept small. This same precaution applies to adults. It has been our custom when dealing with young adults, mostly student nurses and medical students, to still use the Schick test, and to give no further immunization to those who have a negative test. If the test is positive, however, I believe a booster injection of diphtheria toxoid should be given. If the Schick test remains positive some months after the injection, I do not believe that it is necessary to do anything further for there is a strong possibility that the reaction following the injection of the Schick testing material may be non-specific. It has been shown that persons may have an adequate amount of diphtheria antitoxin in their blood and still show a sharp cutaneous reaction to the Schick test. These persons are supposed to be allergic to the testing material and may react both to the Schick test and to the Schick test control and still will have an adequate amount of circulating antibody for protection against the disease.

Precautions

There are a few precautions which should be taken when immunizing children. Everyone should know that the infant with eczema must not be vaccinated against smallpox, nor should any member of his household be vaccinated. There are many reports in the literature of infants who have developed eczema vaccinatum following vaccination of an older sibling against smallpox. Eczema vaccinatum is a highly fatal disease. Children

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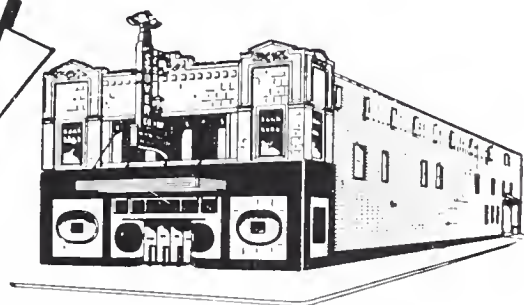


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who have eczema should not be vaccinated until after their second or third year when the eczema is very likely to disappear. If it does not disappear, smallpox vaccination should be postponed indefinitely. So long as a majority of the persons in a community are vaccinated against smallpox, the disease is not likely to appear. Therefore, one is choosing the lesser of two evils when he withholds smallpox vaccination entirely in a case of a person who has eczema.

Any child who has shown a severe reaction to an injection of antigen, particularly pertussis vaccine, should not receive a subsequent injection until all details of the reaction have been carefully evaluated. Although the exact mechanism of postvaccination encephalitis or encephalopathy is not understood, it is known that the occurrence of high fever following injection of pertussis vaccine, or a combination of antigens containing pertussis vaccine, is a warning sign that should not be ignored. High fever is a particularly significant sign. In his paper on severe reaction following immunization procedures, Toomey showed that in the majority of instances where injection of vaccine was followed by severe and often permanently damaging central nervous system reaction, a warning might have been taken from the febrile and systemic reaction to preceding injections. I think that this point cannot be emphasized too strongly. If the child shows fever above 102 and an unusually violent systemic or local reaction following injection of any antigen, he should not receive a subsequent injection unless the seriousness of the disease for which the vaccination is being done far outweighs the possible damage of central nervous system reaction to subsequent injection of that antigen. Even whooping cough is not potentially as serious to the child as is post-pertussis vaccine encephalopathy.

Summary

At the present time there are three immunization procedures which may be classed as "musts" so far as children are concerned. These are immunization against diphtheria, whooping cough and smallpox. To this group should be added immunization against tetanus, for the child is in about the same classification as the farmer or the soldier in that he is very likely to sustain a penetrating wound at some time during his childhood. Many active and passive immunizations other than these four are available and should be used when occasion requires. In all instances adequate precaution and judgment should be exercised so that the child will not be harmed by immunization procedures.

RANDOM THOUGHTS OF THE SECRETARY

January 18th. Joining Bob Thompson and Cleve Thompson in the new hunting sport of these parts, shooting rats at the city dump, an opportunity to turn much firepower loose with 22s and to demonstrate marksmanship at intervals, a fete which Hodges attains all too frequently with a 22 automatic pistol.

January 21st. With dermatologic authority and convincing photography Goldstein performs in commendable manner at tonight's staff meeting, presenting, this time, some cases not just seen today.

January 23rd. With Mendelsohn as guests of the technicians at Crawford County Medical Hospital with spaghetti a la Fred Knies of Eastman and to hear informative discussion of technics without being called on to present the radiologist's opinion to any great degree.

January 27. In prolonged session with the Committee on Arrangements and the Executive Committee of the Council. Braniff's new schedule permitting us to linger throughout the afternoon and henceforth the Council session will find us the last to leave.

January 31st. Tonight at Banks Coffee Shop in Fayetteville where good food is served with courtesy and reading in the Southern Medical Journal, the presidential address by Curtice Rosser, warming to this rebel soul, and Jerry Levy's excellent discussion of protein hydrolysates in peptic ulcer with gracious credit given Kenneth Siler.

February 3. Sitting with the residents at Kansas University Medical School for Hoecker's discourse on radiation physics, marveling that we, at least, comprehend the first lesson.

A piece of scientific research done by the Department of Interior at taxpayer's expense has resulted in a pamphlet called DEER MORTALITY AND GUNSHOT WOUNDS.

One of the more astounding conclusions reached by this detailed study is that more deer without antlers are left lying around after being shot by hunters than are deer with antlers. Wonder why?



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EDITORIAL
THE 1952 ANNUAL SESSION

This issue of The Journal contains the preliminary program and announcements of the coming annual session to be held at Hotel Marion, Little Rock, April 21st, 22nd and 23rd. A scientific program of interest has been arranged with distinguished speakers on subjects of general interest. The popular section plan will again be employed in order that the special interests of those in attendance may be reached with a program directed to the specialties of general practice. Distinguished speakers will be headed by John

W. Cline, President, American Medical Association, and will include H. J. Moersch, Mayo Clinic; Edward C. Reiffenstein, Oklahoma City; Thomas H. Hunter, Saint Louis; Grayson Carroll, Saint Louis; Gene B. Starkloff, Saint Louis; James T. Allen, New Orleans; Harvey Stone, Baltimore; Andrew A. Marchetti, Washington; Albert H. Aldridge, New York, and Joe Marque, Durham, N. C. The annual banquet session will be held Tuesday night and will feature the address of the President of the American Medical Association, John W. Cline, San Francisco. Monday evening, April 21st, the Pulaski County Medical Society will be hosts at a dance. The House of Delegates will meet Monday and Wednesday afternoons. The Past-Presidents will hold their annual breakfast Wednesday morning and the Fifty-Year Club will meet in its annual session at a Tuesday morning breakfast.

Acting upon the Society's mandate that Federal funds not be employed for purposes of bringing speakers before the Society, a registration fee will be charged all registrants of five dollars. This fee will permit the Society to carry out the many activities of the annual session without incurring the customary deficit. The Society's disapproval of the use of Federal funds for post-graduate medical education and for speakers at medical society affairs has been approved by the House of Delegates of the American Medical Association.

It is hoped that each member who can possibly attend the coming annual session will do so even if not able to remain for the full three days. Acquaintance with fellow members and with the purposes of the organization makes for a stronger, more forceful medical organization and makes each member a better physician.

EDITORIAL COMMENT
THE FIFTY-YEAR CLUB

The Fifty-Year Club of the Arkansas Medical Society composed of those members who have been in practice for a period of five decades will meet in its usual breakfast session, Tuesday, April 22nd, 1952, at 7:30 A. M. in the Hotel Marion. Present members are urged to make their plans to be in attendance and other who are qualified for membership should write the secretary of the club, J. H. McCurry, Cash, Arkansas, in advance of the meeting in order that membership may be effected.

EULOGY

Dr. William Banbury Crowgey, age 66, Scott, Arkansas, died at his home December 11, 1951, of coronary occlusion, following pneumonia.

Dr. Crowgey was born at Wytheville, Virginia, May 1, 1885. He graduated from Medical College of Virginia, Richmond, Virginia, in 1911 and moved to Scott, Arkansas, October, 1914, and has practiced medicine since he moved there after practicing two years in West Virginia.

For several years, Dr. Crowgey was affiliated, and a member of the staff of Pulaski County Hospital, and also staff of Dr. C. S. Pettus Hospital, both of Little Rock, Arkansas. He has been a past president of Lonoke County Medical Society, as well as other official positions to Arkansas State Medical Society.

Survivors include his wife, Mrs. Bird Hockersmith Crowgey of the home, three brothers, R. V. Crowgey of Wytheville, Virginia, H. B. Crowgey of Elkton, Maryland, and Beaufort Crowgey of Plymouth, England; two sisters, Miss Evelyn Crowgey of Wytheville and Mrs. R. H. Alexander of Newbern, Virginia.

Funeral services were conducted at Healey & Roth Chapel, Little Rock, Arkansas, by Rev. Michael Carozza. The body was sent to Wytheville, Virginia, for burial.

Geo. L. Mallory, M. D.,
President, Lonoke County
Medical Society
Robt. M. Kelly, M. D.,
Sec.-Treas., Lonoke County
Medical Society

WOMAN'S AUXILIARY NEWS

A morning coffee was held Monday, February 4, at the home of Mrs. W. R. Brooksher, 3809 Free Ferry, by the Sebastian County Medical Society Auxiliary in cooperation with the Sebastian County Unit of the American Cancer Society. Cancer films were shown. The presidents and representatives of various Parent-Teacher Associations, social and civic organizations were invited to attend. Hostesses for the occasion were Mrs. A. A. Blair, Mrs. Wright Hawkins, Mrs. Kenneth Thompson, Mrs. E. Z. Hornberger, Mrs. L. A. Whittaker, Mrs. Thomas Foltz, Mrs. W. L. Shippey, Mrs. S. J. Wolferman. Approximately 125 guests attended.

As a result of the efforts of the Public Relations Committee, the county agent is enclosing in his monthly letter to all the rural families in Sebastian County a pamphlet entitled "A Doctor For You" which the American Medical Association has published under its Extension of Medical

Care program.

The December meeting of the Howard-Pike County Medical Auxiliary was a Christmas party held at the home of Dr. and Mrs. H. H. Holt. Mrs. Nina Dildy was responsible for the program and invited Congressman Tackett and Mrs. Tackett to attend. The Congressman spoke informally and answered questions on legislation. Mrs. Marion Mabry and Mrs. Edwin V. Dildy were co-hostesses.

Several of our members took an active part in filling Welfare Christmas Boxes and in the Christmas Seal Sale.

The Woman's Auxiliary to the Garland County Medical Society met Monday, January 21, at the home of Mrs. E. K. Clardy with Mrs. George Footio and Mrs. N. B. Burch as co-hostesses.

The President, Mrs. Robert Atkinson, introduced Dr. E. H. Dildy and he gave an interesting talk on "Dental Health."

The following guests were introduced: Mrs. Harvey, Mrs. Scully's guest from Washington, D. C.; Mrs. Livesay and Mrs. Nickel from the Army and Navy Hospital and Mrs. Floyd Clardy.

Mrs. George Allen, Mrs. Proctor Brown and Mr. Langley presented a film on "The Mother's March Against Polio" and asked for volunteers for the drive to be held January 31.

The roll was called, the minutes were read and approved and a letter of appreciation from the Department of Public Welfare was read. The treasurer reported a balance of \$236.30.

Mrs. Atkinson reported on the party given for the Old Folks Home. Mrs. Anderson gave a puppet show and Mrs. Vera Fletcher read some of her poems and refreshments were served. It was voted to pay for the refreshments from the treasury.

Mrs. E. K. Clardy, Mrs. Jack Wright and Mrs. R. L. Daniels were asked to be in charge of the plans for a tea to be given for all senior girls interested in nursing.

Mrs. John Dodson was appointed as a delegate to attend the heart fund drive meeting.

Mrs. Jim Leatherman had charge of the Research and Romance of Medicine program and gave the biography of Dr. Ignaz Philipp Semelweis.

Mrs. Frank Burton announced that there would be a luncheon meeting at the Arlington Hotel February 18 at 1 o'clock in honor of Mrs. Martindale, State President of the Medical Auxiliary.

The meeting adjourned and delicious refreshments were served.

Mrs. C. W. Parkerson,
Garland County Medical Auxiliary.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

MASS ROENTGENOGRAPHIC SURVEYS IN SMALL HOSPITALS

RUSSELL H. MORGAN, M. D.,
The American Review of Tuberculosis,
September, 1951.

When mass roentgenographic procedures were applied to the tuberculosis case-finding program a few years ago, it was soon realized that the patients admitted to general hospitals constituted a large and readily accessible group in which the yield of positive cases was considerably greater than that occurring in mass surveys of other groups. Hodges demonstrated that the incidence of tuberculosis among the patients admitted to the University of Michigan Hospital was 2.3 per cent. Moreover, the detection of other pathology brought the total yield of significant lesions to almost 10 per cent.

There has been a rather slow acceptance of mass roentgenographic procedures among hospitals having capacities of 50 to 250 beds. This has been due, in part, to the understandable reluctance of attending radiologists to undertake a burden of some magnitude without a reasonable return. In the larger teaching hospitals many of the radiologists have provided routine small-film examinations at no cost to the patient—a policy which has caused some health authorities to advocate free routine chest examinations in all hospitals. This thinking, however, is not necessarily sound when applied to small hospitals.

In many small hospitals, funds are not available to furnish a mass photofluorographic installation from operating revenues and the radiologist may provide the necessary equipment. If this is the case, free routine admission chest films can hardly be insisted upon. Ten to twelve thousand dollars will be required for the installation and a charge of about \$1.50 per chest film will be necessary. This charge for a miniature chest film is a reasonable levy. The frequent detection of unsuspected pathology makes them worth many times their cost to the persons with pulmonary lesions. Thus, where public funds are not available to install a routine chest unit in a small hospital, each patient should be charged a nominal sum for the unit's support. Indeed every local tuberculosis association should examine its budget to determine

whether money is available to demonstrate the value of the procedure. Many times a little added support will make successful mass chest survey programs in small hospitals possible.

Another reason for the slow acceptance of routine photofluorographic examinations in small general hospitals has been the erroneous belief that these procedures become inefficient and costly when numbers less than fifty to one hundred are to be examined each day. To illustrate this point let us examine the situation in a large general hospital and then adapt it to a hospital having a capacity of 100 beds.

The technical cost of performing a photofluorographic examination may be divided into the following categories:

- (a) Amortization on capital equipment
- (b) Service to capital equipment
- (c) Photofluorographic supplies such as film and developer
- (d) Personnel, including technician, secretary, and such other persons as are necessary
- (e) Rental of floor space
- (f) Utilities, including light, heat, telephone, and laundry.

In a large hospital about 15,000 examinations are performed each year. The service charges usually average five cents per exposure or \$750 for 15,000 examinations. These charges will be incurred when X-ray tubes, valve tubes, or other components require replacement. The cost of photofluorographic film and other supplies for units using 70 mm. film also amounts to approximately seven cents per exposure or \$1,050 for 15,000 examinations.

The personnel needs of a photofluorographic installation will vary. However, where the yearly number of examinations approaches 15,000 one X-ray technician and one clerk-typist are needed. These individuals register the patients, make and process the films, record reports from the radiologists who read the films, and file the films and reports. The floor space needed usually approaches 500 square feet. At a nominal rental such space represents an expense to the procedure of \$1,500. Electric power and telephone service may approach \$300.

The technical cost of operating a photofluorographic unit in a large general hospital may be:

(1) Amortization of capital equipment.....	\$ 1,500
(2) Service charges.....	750
(3) Film and developing chemicals.....	1,050
(4) Personnel	5,100
(5) Floor space.....	1,500
(6) Utilities and miscellaneous expense....	300
<hr/>	
Total	\$10,200

The technical cost per routine chest film in a large hospital approaches seventy cents.

Let us now examine a hospital with a capacity of 100 beds and 2,000 or more admissions per year or eight admissions per day. In such a hospital an economical arrangement can be achieved usually by placing a photofluorographic hood and cut-film camera within a room of the department of radiology. The capital equipment, in a department of radiology today costs approximately \$7,500. The regular case-load in a hospital of this size approaches 16 patients per day. Since the photofluorographic portion of this load constitutes one-third of the total, one-third of the cost of capital equipment (or \$2,500) should be amortized against the routine chest procedures. To perform the photofluorographic examinations a hood and cut-film camera will be needed. Even in a small hospital, photofluorographic procedures are more economical. If all the equipment is amortized on a ten-year basis and 2,000 examinations were done each year the total equipment costs would be about 25 cents per film. The costs of service, film and developing chemicals, and personnel will approach \$100, \$140, and \$700, respectively.

The technical budget for a small 100-bed hospital performing routine chest examinations might include:

Amortization of capital equipment at hand	\$ 250
Amortization of photofluorographic apparatus	250
Service	100
Films and developing chemicals.....	140
Personnel	700
Floor space.....	500
Utilities and extras.....	50
<hr/>	
	\$1,990

If 2,000 examinations are performed within this budget, the technical cost per examination would be just under one dollar, which is only 50 per cent greater than that encountered in a large general hospital. This difference clearly indicates that from an economical standpoint mass chest surveys are feasible in small hospitals.

Nothing has been said regarding the professional fees of the radiologist who reads the routine chest films of a small hospital. It seems unreasonable that a physician who makes his living from radiological methods should forego revenue from so time-consuming a procedure. These charges, which usually approximate fifty cents per film, bring the total cost of the photofluorographic examination in a small hospital to approximately \$1.50.

Most small hospitals should have mass radiographic equipment which could be used to serve the community as well as the hospitals.

In this abstract the author has changed some of the figures used in the original article in order to bring them more in line with the current situation.

PROCEEDINGS OF SOCIETIES

The Ouachita County Medical Society was entertained at dinner at the Colonial Inn in Fordyce Thursday evening, February 7 by Drs. Roberts and Parks of Fordyce.

Speakers were as follows:
"Low Back and Pelvic Pain from the Standpoint of a Gynecologist," Edward C. Gillespie, Little Rock, and "Psychosomatic Medicine," E. Reese, Little Rock.

Announcement was made of the Medical Board of the new Ouachita County Hospital as follows: R. B. Robins, Chief of Staff and Chief of Surgery; N. G. Partee, Chief of Medicine; Perry Dalton, L. E. Drewery, H. G. Hearnberger. R. B. Robins, Secretary.

"The Use of Protein Hydrolysates in the Therapy of Peptic Ulcer" by Jerome S. Levy, Little Rock, appears in the Southern Medical Journal for January, 1952.

W. M. Gross, Fort Smith, recently addressed the Pittsburg County (Oklahoma) County Medical Society on "Low Back Pain."

Frank Kumpuris, Little Rock, recently took special work in cardiovascular surgery in New York.

"The Control of Trachoma" by K. W. Cosgrove, Little Rock, appeared in the Southern Medical Journal, February, 1952, issue.

Among those in attendance at the Dallas regional meeting of the American College of Surgeons were: W. E. Jennings, Rogers; D. E. White, J. B. Wharton, Jr., El Dorado; Jos. F. Shuffield, Henry G. Hollenberg and W. G. Cooper, Little Rock; Fred H. Krock, Fort Smith;

Al Buchanan, Prescott; L. M. Lile, Hope, and Decker Smith and L. P. Good, Texarkana.

Joe F. Rushton has been elected president of the Magnolia Chamber of Commerce.

The Office of Postgraduate Medicine is happy to announce that during the month of March there will be two postgraduate courses offered at the medical school. The Department of Radiology will hold a course on March 7 and 8. The Department of Surgery will hold a three-day course on March 24, 25, and 26.

Registration is being received for these courses at this time.

At the Dallas session of the Southern Medical Association, Fount Richardson, Fayetteville, was elected Chairman, Section on General Practice, and K. W. Cosgrove, Little Rock, was elected, Chairman-Elect, Section on Ophthalmology and Otolaryngology.

S. B. Moss has been elected a director of the McGehee Chamber of Commerce.

T. W. Hardison, Morrilton, has been appointed a member of the Resources and Development Commission, State of Arkansas.

H. T. Smith, McGehee, has been elected president of the Delta Country Club.

R. E. Crigler, Fort Smith, has been reappointed to the Board of the Arkansas Tuberculosis Sanatorium.

E. D. McKnight, Brinkley, has been reappointed to the Arkansas State Board of Health.

C. H. Frank, Texarkana, has been elected president of the Association of Tumor Clinic Staffs in Arkansas.

The following attended the Chicago session of the American Academy of Orthopedics: W. M. Gross, W. E. Knight, Fort Smith; Coy Kaylor, Fayetteville; F. W. Carruthers, Kenneth Jones and S. B. Thompson, Little Rock, and T. M. Durham, Jr., Hot Springs National Park.

Drs. James G. and Jud B. Martindale have moved to their new clinic building at 116 South Main Street, Hope.

S. B. Moss has been elected a director of the McGehee Chamber of Commerce.

REPORTS OF COMMITTEES

(To be presented to the 1952 session of the House of Delegates, Little Rock, April 21, 1952; published in The Journal in accordance with action of the House of Delegates at its 1948 annual session. These reports will not be read at the annual session but committee chairmen may amend or add to the printed reports.)

COMMITTEE ON CIVILIAN DEFENSE

JOSEPH A. BUCHMAN, Chairman

At a meeting of the Committee on Civilian Defense the following points were discussed, and in connection with these reports, certain plans were made:

(1) The use of the physicians in time of need. Since no part of this state is in a so-called target area, it was decided that the best use of the physicians would be in making certain ones available for duty where needed. With this in mind, a plan which must necessarily change from year to year was drawn up, listing the names of those physicians which were felt to be the most eligible for use elsewhere.

(2) The use of nurses. A similar plan was drawn up with suggested quotas from the various cities for emergency call.

(3) The use of pharmacists. It was the feeling of the committee that pharmacists also would be needed, and plans are in the making for contacting the State Society for a complete list of their members and their suggestions as to the availability of pharmacists.

(4) It was decided that stock-piling of medical material was highly impractical, but means should be available to obtain any medical material that is needed as rapidly as possible. The chief needs, of course, would be whole blood, plasma, and intravenous fluids. It was suggested that the most rapid method of obtaining blood would be from the Bleeding Centers in surrounding areas.

GRIEVANCE COMMITTEE

O. J. T. JOHNSTON, Chairman

The Grievance Committee has handled several cases during the past two years. All of them have been taken care of satisfactorily except one. We are getting the information on this one and will be able to report at a later date.

COMMITTEE ON MATERNAL WELFARE

E. C. GILLESPIE, Chairman

I have the honor of presenting to you the summary of the activity of your Committee on Maternal Welfare for the year 1951-1952. During this period of time we have attempted to revive interest throughout the state in the problems associated with our embarrassing rate of maternal mortality.

The committee met initially at Trinity Hospital and Clinic on November 23, 1951. Interested persons who attended other than the committee members included: (1) Dr. Eva Dodge, Associate Professor of Obstetrics and Gynecology, representing the Medical School; (2) Dr. Frances Rothert, Director of Maternal and Child Health for the State of Arkansas; (3) The Honorable President of our Society, Dr. Charles R. Henry.

Briefly, the following material came before us.

1. The 73 maternal deaths which occurred during 1950. These were reviewed in as much detail as possible from the material available. The maternal death rate was 1.7 per

thousand live births which is the fourth highest in our nation.

2. Proposals for methods of reducing maternal mortality were then introduced as follows:

(a) A more complete form would be sent to each physician responsible for a maternal death in the state. A copy of this expanded form would be sent to each physician in the state together with a letter explaining its purpose and the renewed interest in this problem.

(b) The state was divided into arbitrary districts based upon the county lines and each committee member assumed responsibility for about 12 counties in the vicinity of his practice. He will be informed about each maternal death occurring in his locality and will attempt to obtain as much information as possible from the attending physician or midwife.

(c) The material which we hope to obtain in the manner stated above will be analyzed at regular intervals.

(d) The prenatal clinics being established throughout the state should be publicized as much as possible and supported by the local physicians in each community. Every effort will be made to increase the number of these clinics.

(e) Deliveries performed by unlicensed midwives should be discouraged by the physicians wherever possible.

Plans were made at the termination of this meeting to put into motion the procedures set forth in Sections (a), (b), (c), (d), and (e) and a detailed study is now in progress covering all maternal deaths for the first half of 1951 and each new maternal death as it occurs in 1952. Analysis of maternal deaths which occurred in 1950 is admittedly superficial because of the scarcity of available material. Even this material would not be available were it not for the tireless efforts of Doctor Rothert and her workers at the State Office. However, it appears that although society and patient-ignorance are large factors in our high maternal mortality rate, we as physicians carry the major responsibility.

Your committee wishes to submit certain pertinent suggestions:

1. That the present committee be allowed to continue its work in the coming year if this meets with the approval of the President and his Counselors and if it is felt that the work is of sufficient significance.

2. That the prenatal clinics now established and now being established in the state be given our whole-hearted cooperation.

3. That we cooperate with the midwives' teaching program and discourage deliveries by unlicensed midwives.

4. That the physicians in the state be urged to attend the postgraduate courses offered by the University of Arkansas at regular intervals.

RURAL HEALTH COMMITTEE

J. ARNOLD HENRY, *Chairman*

Following the Sixth National Conference on Rural Health which was held in Memphis, Tennessee, on February 23 and 24, 1951, Dr. Charles R. Henry, President of the State Society, who had been in attendance at this meeting, decided on enlarging the activities of the Rural Health Committee of the State Medical Society.

A new Committee on Rural Health was appointed shortly after, and I was made chairman of this committee. At a meeting in March 1951, the Rural Health Conference decided on the following goals for 1951 and 1952.

Goals for Rural Health Committee

- (1) To better health conditions in rural Arkansas.
- (2) To study the problems of rural health with the rural people themselves; and to acquaint ourselves with the

needs of rural health in Arkansas as they exist today.

(3) To affiliate the State Medical Society with the organized and powerful farm groups.

(4) To organize and develop a rural health conference for Arkansas.

(5) To attempt to better public relations between the State Medical Society and the people of Arkansas.

Activities of the Rural Health Committee

The planning, organization and establishment of the first Rural Health Conference for Arkansas.

At the first meeting of the Rural Health Conference, it was decided that the State Medical Society would sponsor a Rural Health Conference for Arkansas. At this meeting, we had the very able guidance of Dr. Charles R. Henry, and the excellent and wise services of Mr. Aubrey Gates, Associate Director of the Agricultural Extension Service, University of Arkansas, who at that time was on leave of absence to the American Medical Association as a Field Director for the National Rural Health Committee. Also at this meeting was Mr. Waldo Frasier, Executive Secretary of the Arkansas Farm Bureau Federation, and Mrs. Hazel Jordan of the Extension Service and Miss Helen Robinson of the Extension Service. Also Mrs. Mason G. Lawson, Second Vice President Woman's Auxiliary to the American Medical Association, and Mrs. James G. Martindale, President, Woman's Auxiliary to the Arkansas Medical Society; Mrs. Warren S. Riley, Chairman of the Rural Health Committee of the Woman's Auxiliary to the Arkansas Medical Society; also W. R. Alstadt, D.D.S., and R. M. Lord, D.D.S., of the Arkansas State Dental Association.

The members of the Rural Health Committee, along with this very excellent Advisory Committee, immediately launched themselves into the planning and organization for the first Rural Health Conference.

It was further decided that this Conference would be held on Thursday afternoon, Thursday evening and Friday morning, of August 9 and 10, 1951.

Following the initial meeting, numerous committee meetings were held, usually with full attendance of the Advisory Committee. A very excellent program was worked out which consisted of the following talks:

(1) The Rural Health Program of the American Medical Association—Dr. F. S. Crockett, M.D., Chairman, Rural Health Committee, American Medical Association.

(2) The Problem of Medical Education in Arkansas—Lewis Webster Jones, Ph.D., President, University of Arkansas.

(3) The Dentist and the Rural Health Program—Dr. Don M. Hamm, D.D.S., Secretary, Arkansas State Dental Association, Clarksville, Arkansas.

(4) The Physician's Role in Rural Health—J. Arnold Henry, M.D., Chairman, Rural Health Committee, Arkansas Medical Society, Russellville, Arkansas.

(5) Group Discussion and Question Period—Paul A. Miller, Extension Service, Michigan State College, East Lansing, Michigan.

(6) Let's Try the American Way—Mrs. Charles W. Sewell, Former Director, Associated Women, American Farm Bureau Federation, Otterbein, Indiana.

(7) A Plan for Rural Medical Services—George F. Bond, M.D., Bat Cave, N. C.

(8) A Film: Here's Health—The American Way.

(9) The Farm Family Looks at Rural Health—Joe Hardin, Grady, Arkansas, President, Arkansas Farm Bureau.

(10) Good Health Is Everybody's Business—Aubrey Gates, Little Rock, Arkansas, Associate Director, Agricultural Extension Service, University of Arkansas.

(11) Following Through Back Home—Mrs. J. Howard

Crawford, Arkadelphia, Arkansas, President, Arkansas Council, Home Demonstration Clubs; and Miss Helen Robinson, Little Rock, Arkansas, Extension Health Education Specialist, University of Arkansas.

This Conference was attended by over 600 people, who filled to overflowing the ballroom of the Hotel Marion. This group received enthusiastically the talks which were given, and entered very readily into the discussion periods which were very ably handled by Paul A. Miller.

This Conference was attended by approximately 85 physicians.

The Conference was given very excellent newspaper coverage by the Arkansas Gazette and also by the Arkansas Democrat.

The people who attended the Conference seemed to genuinely enjoy it, and to take a keen interest in the subjects that were discussed. They were very frank also in their suggestions as to the betterment of health in rural Arkansas, and they were all in agreement that a similar Conference should be held the following year.

Dr. Crockett, Chairman of the Rural Health Committee of the American Medical Association; Paul S. Miller of Michigan State College, and Mr. Aubrey Gates of the Extension Service were all men who had attended numerous similar conferences in the past. These men were all in agreement that this conference was superior to any comparable State Rural Health Conference; and they stated that the attendance far exceeded the State Health Conferences that they had attended in other states. They were of the opinion that it was a very decided success.

Results of the Work of the Rural Health Committee,

1951 and 1952

(1) The organization of a very successful Rural Health Conference for Arkansas and the establishment of this as a yearly event.

(2) The creation and stimulation of interest in Rural Health Problems in Arkansas.

(3) A program for rural health for Arkansas with an attempt to educate the individual members of the Medical Society to this program.

(4) Obtaining the support, interest, and friendship of the following powerful farm and professional organizations in the State of Arkansas: (1) The Agricultural Extension Service, University of Arkansas. This includes the Home Demonstration Agents and the Farm Agents who are located in every county of Arkansas. (2) The backing of the Arkansas Farm Bureau Federation. (3) The support of the Arkansas Council, Home Demonstration Clubs. (4) The close support of the Arkansas State Dental Association. (5) An increased interest in Rural Health Problems by the Woman's Auxiliary to the Arkansas Medical Society.

(5) The stimulation of interest in the establishment of an increased number of Health Councils in Arkansas.

(6) Creating an interest within the State Medical Society, and a sense of responsibility of the State Medical Society for the Rural Health of Arkansas. It is hoped that this stimulation of interest will carry on for many years to come, and will result in a very definite improvement of Rural Health in Arkansas.

(7) Plans for the Second Arkansas Rural Health Conference.

(8) It is felt that through activities of the Rural Health Committee and chiefly through its Rural Health Conference that a great deal of good public relations was obtained between the people of Arkansas, especially the rural people, and the State Medical Society.

It is felt that this public relations aspect of the Rural Health Conference has done more to benefit the State

Medical Society than any other single program that the State Society has attempted.

In my opinion, one of the greatest things to come out of this conference was the realization that there are very able people, and very powerful organizations in the State of Arkansas, who stand ready and who are more than willing to help the State Medical Society in any program to improve health conditions in Arkansas. These people and these groups also will stand behind us to fight Socialized Medicine, if we will only give them the support and guidance which they need.

It is to the interest of each member of the State Medical Society that they recognize that the following organizations are their true friends. It is also necessary to realize that to obtain the friendship of these people that we should stand ready to assist them in any way in which we can be of service. We would like to urge on the individual members of the State Society that if members of these organizations should call upon them for aid, that they do everything in their power to be of assistance. These organizations which are the true friends of the State Medical Society are as follows:

(1) Agricultural Extension Service, University of Arkansas. The individual members of the State Medical Society will recognize these people more familiarly as the County Agent and the Home Demonstration Agent.

(2) The Arkansas Farm Bureau Federation.

(3) The Arkansas Council of Home Demonstration Clubs. This organization is composed of the individual Home Demonstration Clubs which exists throughout every community, in each county of the state.

It is also urged that each member of the State Medical Society do all possible to work in close affiliation with their associates, the members of the dental profession who make up the Arkansas State Dental Association. It is also urged that each doctor see that his wife takes an active part in the Woman's Auxiliary to the Arkansas Medical Society. This organization is a very active one, and is able and capable of doing excellent work.

In closing I would like to make special acknowledgment of the very excellent guidance and able assistance of Dr. Charles R. Henry, Mr. Aubrey Gates, Mr. Waldo Frasier, Mrs. Hazel Jordan, Miss Helen Robinson, Mrs. Mason G. Lawson, Mrs. James G. Martindale, Mrs. Warren S. Riley, Mrs. J. Howard Crawford, Lloyd Dhonau, W. R. Alstadt, D.D.S., R. M. Lord, D.D.S., Maurice J. Friedman, D.D.S., and to the individual members of the Rural Health Conference who by their very able work and assistance has made the work of the Rural Health Committee a success during the past year.

REPRESENTATIVE, ARKANSAS PHARMACEUTICAL ASSOCIATION T. DUEL BROWN

The Arkansas Pharmaceutical Society had a meeting on January 20, 1952, at 5:15 p. m. at the Hotel Marion in Little Rock for installation of officers for the coming year. Approximately one hundred members and guests were present.

The Representative from the Arkansas Medical Society, Dr. T. Duel Brown of Little Rock, was introduced to the Society. After the introduction, Doctor Brown addressed the group, emphasizing the importance and value of close cooperation between the physicians and druggists, saying that it is better for the druggist friend to find the physician's mistakes than for the undertaker to bury them. Much good will with the public can be gained by a united front of the physicians, dentists and druggists. This cooperation

will help promote the Rural Health Program and a better understanding for all of us.

Doctor Brown will attend the A. P. S. meeting in the early part of April and a representative of the A. P. S. will attend the Arkansas Medical Society meeting, April 21, 22 and 23, 1952.

COMMITTEE ON LIAISON WITH ARKANSAS MEDICAL AND HOSPITAL SERVICE, INC.

ROY I. MILLARD, *Chairman*

Following is a report of your Committee on Liaison with Arkansas Medical and Hospital Service, Inc.

Income for 1951 was \$1,157,740.24, as compared to 1950 income of \$667,529.44. Payments to doctors and hospitals amounted to \$887,073.83, or 76.62 per cent of income, as compared with 71.6 per cent of income for 1950. Operating costs during the year were reduced from 18.74 per cent of income to 16.35 per cent of income. Reserves accumulated now amount to \$81,000.00, compared to \$51,000.00 in 1950.

Arkansas Medical and Hospital Service now has an enrollment of 100,000 people. It is interesting to note that membership through the Farm Bureau Federation has more than doubled, and also that non-group enrollment has more than doubled. These two types now represent 24 per cent of the membership of the Arkansas Medical and Hospital Service, Inc. There was one state-wide non-group enrollment last year and two state-wide non-group enrollments are planned for 1952.

Claims policy of the organization has been very liberal with less than 2 per cent of claims being rejected.

It has been the program of this committee to try to develop improvement in relations with the physicians of the state and also with the hospitals. It is felt that there is still room for improvement in this field.

Some of the abuses of the program need to be mentioned. As is almost inevitably true in cases of this kind, there are, no doubt, many abuses. It is felt that surgery has been done, in most cases, only when necessary. However, there are some cases of hospitalization which may not be necessary. It is the feeling of this committee that every physician should have impressed upon him his individual responsibility in trying to see that the program is carried out as it is intended.

As is true in any program of this kind, there are bound to be some complaints. These complaints are divided into the following groups.

I believe the principal complaints made by Arkansas Medical and Hospital Service, Inc., are those of some unnecessary utilization.

Two complaints presented by the hospitals are that the per diem basis does not give them quite enough to meet their expenses due to inflation and the decreased purchasing power of the dollar. However, efforts are being made to adjust these differences as time goes on.

Most physicians seem fairly well satisfied with the program. A large amount of money has gone to the physician through the Blue Shield which probably would not have been collected otherwise. It is felt, of course, that some revision should be made in fee schedules.

It is the plan to attempt to make these revisions as the need for them arises.

Chief complaints from participants is that many still believe that, although they are told when they are enrolled that it is only a hospital policy, that they should have coverage for office calls and for home calls. Of course, as physicians you understand that this is impossible. How-

ever, as physicians it is our responsibility to keep the public informed as to the possibilities with voluntary pre-payment health insurance.

This committee would like to make the following recommendations: First, that Arkansas Medical and Hospital Service, Inc., continue to attempt to give present good service at as low cost as possible. Second, that continued efforts be made to improve relations with hospitals by attempting to eradicate any inequities which may arrive. Third, that schedules for Blue Shield be revised as experience indicates that they may be safely. Fourth, that every physician accept the responsibility which is ours of attempting to keep the public informed as to the nature of Blue Cross-Blue Shield. Let us keep telling our people that this is not a plan for taking care of all medical expenses, but that this is a plan for taking care of the big expenses which so often strike such a devastating blow at the budget of especially the low and middle income groups.

The committee will welcome any suggestions and feels certain that the officials of Arkansas Medical and Hospital Service will be happy to cooperate in any way possible.

COMMITTEE ON THE AUXILIARY TO THE ARKANSAS MEDICAL SOCIETY

R. C. DICKINSON, *Chairman*

The Auxiliary to the Arkansas Medical Society, under the able leadership of Mrs. James G. Martindale, had a most active and progressive year. The following report only partially illustrates the tremendous amount of work accomplished by her and her staff. They have taken on a tremendous amount of additional work during the year.

Upon entering the final quarter of its 27th year, the Auxiliary to the Arkansas Medical Society has 26 component Auxiliaries with members from 42 counties. Members-at-large from additional counties leave only a few counties in the state not represented. A survey of county reports reveals many new members and it is expected that our total membership of 660 for last year will be substantially increased when reports for the year are complete.

The most remarkable achievements for 1951-1952 have been in the greatly extended field of public relations with special emphasis on the many activities which involve relations with the lay public. Members have been urged to exert themselves, not only as Auxiliaries, but also on an individual basis, by active participation in all civic plans related to health. Our theme for the year, "A Dedicated Membership," places definite responsibility on each member, as a doctor's wife, to serve, with devotion, the great cause of American Medicine.

The established objectives of the National Auxiliary, the projects paralleling the program of our parent organization, and the requests of the Arkansas Medical Society have all received our intense and earnest efforts.

Following the April Convention, a School of Instruction, for the training of new officers, chairmen, county presidents and other members of the Board, was attended by more than 70. In panel discussions, twenty-four able participants carefully explained the duties and plans for the year. Guest speakers were: Dr. Charles R. Henry, President, Arkansas Medical Society; Dr. R. C. Dickinson, Chairman, Advisory Council; Mr. Aubrey D. Gates, Rural Health Committee, A.M.A. Printed programs and attractive handbooks with a detailed outline of the year's work, month-by-month, were presented to all members of the Board. This informative, inspiring beginning set a high standard and a rapid pace, furnishing enthusiasm and momentum to carry

us through a successful year with the slogan, "Keep Our Program Progressive."

The president attended the 28th Annual Convention of the Auxiliary to the American Medical Association in Atlantic City, where the Arkansas Auxiliary was represented by a full quota of delegates, with seven delegates and one alternate, in addition to the presidential delegate. With great pride, we saw one of our own members, Mrs. Mason G. Lawson, installed as Second Vice President of the Woman's Auxiliary to the American Medical Association.

At the request of Dr. Charles R. Henry, a committee on Rural Health was added this year. Our most outstanding single achievement was in co-sponsoring the Rural Health Conference. The president served on the Society's Committee to organize and plan the Conference, and apprised all Auxiliary members by letter. The Auxiliary cooperated wholeheartedly. One Auxiliary alone sent out 300 invitations. Auxiliary committees attended to decorations, registration and the general duties of entertaining the Conference. The overwhelming success in attendance and enthusiasm was ample reward. Rural and civic leaders and community physicians were brought together for open forum evaluations and exploration of the health problems facing each locality. The Auxiliary was privileged to work with representatives from the Farm Bureau, the State Dental Association, the Home Demonstration Clubs Council, and the Agricultural Extension Service of the University of Arkansas.

Auxiliaries have engaged in various plans to improve rural health in their own localities. Two Auxiliaries have been instrumental in organizing Health Councils. Copies of "More Country Doctors," "A Doctor For You," and "The Community Health Council" have been widely distributed.

At the 8th Annual Conference of presidents, presidents-elect and national committee chairmen, Woman's Auxiliary to the A.M.A., in Chicago, the president discussed "Arkansas' First Rural Health Conference" on a panel on "Health Days."

In accepting a definite responsibility, as wives of physicians, the Auxiliary is showing great interest in Civil Defense, our newest project. Members over the state are enrolling in Home Nursing, First Aid and Nurse's Aid Refresher Courses. Others are serving as clerical and staff assistants in Blood Bank Programs. One Auxiliary has completed a Home Nursing Course, with the teacher and all class members from its membership. This program is 100 per cent constructive public relations and the Auxiliary plans to keep informed, to stimulate interest of others, and to participate with earnest patriotism in the Civil Defense Program for Arkansas.

By proclamation of Governor McMath, March 30th is designated as "Doctor's Day" and will be observed by each Auxiliary. Tributes will be paid to our doctors over the radio, in the press, and from pulpits over the state. Twelve Auxiliaries have planned dinners, buffet-suppers, or parties to honor the doctors on this day.

Three additional installments of the collection of "Biographies of Pioneer Doctors" have been published in the Journal, appearing in the July, August and October issues. These valuable papers were collected by an Auxiliary committee, with research extending laboriously through the past decade. News of the Auxiliary has been allotted generous space in each issue of the Journal. We are grateful for this avenue of communication.

Auxiliaries have continued their radio programs as an effective channel for dissemination of information on health education. The plan is to broadcast non-controver-

sial Health Programs, in a series, with one program each week for 13 weeks. The transcriptions are obtained from the A.M.A. and may be used as a public service feature through courtesy of the Arkansas Radio Managers, or sponsored by a local firm. Both methods are being used, several are now in progress, some are in their second series, others are making arrangements to start. One Auxiliary is currently running "The Story of Surgery."

Furthering the Health Education program, the Auxiliary initiated a well-organized plan to show the film on "Breast Cancer Self-Examination" in each Auxiliary, inviting a select group of local leaders and a local physician to speak or answer questions. Cooperation on this project has been excellent. Thirteen Auxiliaries have shown the film or have made plans for showing it. On the same program one of the Freedom films, "Make Mine Freedom" or "Going Places," has usually been shown. Other films most frequently used by the Auxiliaries are, "Here's Health the American Way" and "Early Diagnosis of Cancer."

Each Auxiliary has promoted "Today's Health," the authentic health magazine. It has been placed in waiting rooms of doctors and dentists, in beauty shops and barber shops, and other places where people read. A large percentage of the Auxiliaries have made gift subscriptions to all schools and libraries in their counties.

Following a conference of their two presidents, last October, the Auxiliary and the State Nurses Organization have correlated their efforts on Nurse Recruitment and Civil Defense by joint committees, eliminating much duplication of effort and cementing the close relationship between these two groups. As plans develop, longer-range and bigger results should follow in anticipation of training these nurses in our own state. One of our Auxiliary members is serving as chairman of a newly-formed Council, representing 11 allied organizations and proposing to work out a state-wide program on recruitment of nurses. One of our Auxiliary officers represented the president at the Nurses' Banquet during their State Convention.

Concern over the shortage of nurses, increasingly exaggerated by the demands of the armed forces, prompted the Auxiliary to launch a vital and enthusiastic campaign for Nurse Recruitment this year. One Auxiliary has adopted this as its main project. Two Auxiliaries have established sizable funds of their own for loans to local student nurses. Auxiliaries have employed various methods to interest students in career of nursing, some of these being: Programs in schools, talks on Career Day, teas and parties for prospective student nurses and their mothers, "Future Nurses Clubs," conducted tours of hospitals, showing the film "Girls in White," obtaining literature, school catalogs and other information.

Auxiliaries have supported the A.M.A. educational campaign against government medicine with determination. They have kept informed, furnished speakers to other organizations, and persevered in enrolling the resolutions of additional community groups. A special drive has been made to obtain 100 per cent in paid poll taxes among members. It is the practice in several Auxiliaries for the county legislative chairman at each meeting to bring the members up-to-date on pending legislation affecting American medicine and health of the American people.

The Auxiliary has maintained its representation in the Legislative League to sponsor constructive legislation.

Auxiliaries set up booths at the State and District Livestock Shows over the state, at county fairs and conventions for the purpose of giving out literature from Whitaker and Baxter and from the A.M.A. Fifty-one thousand pamphlets

have been circulated. Two of the exhibits were electrical displays on health furnished by A.M.A.

All of our four funds will be increased this year by generous contributions from Auxiliary members. The Ilse F. Oates Student Loan Fund has a balance of \$3,081.89 with several counties yet to report and eight loans out. In all, 81 loans have been made to medical students. From the Martha Harding Gann Student Loan Fund, 24 loans have been made to student nurses, seven of which were made this year, leaving a balance of \$1,453.29.

Due to a new approach, the Erle Chambers Memorial Fund has been substantially increased to purchase books for the patients' libraries in the State Tuberculosis Sanatoria. A card index file has been set up for a mailing list to solicit donations from other organizations.

In recognition of the hard and effective work of the Auxiliary during the early months of effort to obtain the Medical Center, the president was invited to represent the Auxiliary at the ground-breaking ceremony in Little Rock.

As a vital part of their programs in public relations, Auxiliaries have held joint meetings with other organizations including the A.A.U.W., B.&P.W. Clubs, P.T.A., and Federated Women's Clubs. Program-time has been given to Civil Defense, Rural Health, Blue Cross-Blue Shield, the A.M.A. 12-Point Program, Legislation, the Program and Services of A.M.A., and Nurse Recruitment. In the interest of an informed laity, Auxiliaries have furnished guest speakers for other groups.

Auxiliaries as groups and by individual members have served their communities by active participation in the established agencies for health and education. Reports by counties indicate activities in the following: Mobile X-ray Units, Sight Conservation, Aid to Crippled Children, Tuberculosis Seal Sale, Blood Bank Program, Heart Campaign, Aid to Cerebral Palsied, Community Service Council, Y-teen work, Community Chest, Audiometer Tests, P.T.A., Red Cross, Service League, Hospital Guilds, the March of Dimes (one of our members is state chairman of the Women's Division, Infantile Paralysis), and Cancer Clinics (an Auxiliary member is state commander of the Arkansas Cancer Society).

In September the president spoke to the Auxiliary to the Tri-State Medical Assembly. The subject requested was "Plans of the Arkansas Auxiliary." The Auxiliary presidents of Louisiana and Texas were also guests. The president has given freely and received all desired help from these and others and has complied with numerous requests to forward information and plans to other states.

All invitations to visit Auxiliaries have been accepted except when prevented by a conflict in dates. These visits have been invariably profitable in correlating the work of state and county, and have afforded a keen enjoyment in personal association.

The Auxiliary is deeply appreciative of the encouragement, counsel and hearty cooperation of the Advisory Council, of the sympathetic assistance of the President of the Society and of the recognition and financial aid given us by the Arkansas Medical Society.

Our achievements, herein summarized, are due to the faithful, earnest efforts of our many capable members. It has truly been a privilege and a joy to serve as leader of such a wonderful group of women. My gratitude is profound for the willing effort of each one, for the warm fellowship and fine spirit of cooperation that has attended our progress. We expect to continue, at an accelerated pace, to the end of another successful year.

Travel Schedule of the President, Woman's Auxiliary to the Arkansas Medical Society

April 25—Post-Convention Board Meeting. School of Instruction. Little Rock.

June 10-16—National Convention, Auxiliary to the A.M.A. Atlantic City, N. J.

June 22—Joint Meeting, Auxiliary to the Ninth Council District, Auxiliary to the Boone County Medical Society. Harrison.

August 9-10—Rural Health Conference. Little Rock.

September 26-27—Auxiliary to the Tri-State Medical Assembly. Marshall, Texas.

October 5—Auxiliary to the Jefferson County Medical Society. Pine Bluff.

October 6—Ground-Breaking Ceremony, Medical Center. Little Rock.

October 16—Fall Board Meeting. Little Rock.

October 17—Auxiliary to the Pulaski County Medical Society. Little Rock.

October 26—Auxiliary to the Bowie-Miller County Medical Society. Texarkana.

November 9—Auxiliary to the Washington County Medical Society. Fayetteville.

November 13-16—Conference of Presidents, Auxiliary to A.M.A. Chicago, Ill.

November 27—Joint Meeting, Auxiliary to the Sevier County Medical Society, Auxiliary to the Howard-Pike County Medical Society. DeQueen.

December 5—Auxiliary to the Union County Medical Society. El Dorado.

February 13—Midwinter Board Meeting. Little Rock.

February 18—Auxiliary to the Garland County Medical Society. Hot Springs.

February 26—Auxiliary to the Columbia County Medical Society. Magnolia.

March 3—Auxiliary to the Sebastian County Medical Society. Fort Smith.

March 11—Auxiliary to the Ouachita County Medical Society. Camden.

March 12—Auxiliary to the Clark County Medical Society. Arkadelphia.

Because of prior engagements I was unable to accept the invitations of the Auxiliaries to the Independence and Arkansas County Medical Societies and of the Second and Fourth Council Districts.

I have attended numerous committee meetings in Little Rock, including all meetings of the Rural Health Committee, a meeting of the Women's Advisory Committee on Infantile Paralysis, and a Conference of Women Leaders on Civil Defense.

ADVISOR, ARKANSAS PRACTICAL NURSES ASSOCIATION

FRED WM. HARRIS

I have met with the licensed practical nurses on several occasions to discuss with them current problems. The association is active and growing. Their interest in improving themselves individually and as an association is to be commended.

Two major problems have developed the past year:

(1) The Kellogg Foundation has offered to aid in establishing schools for the training of practical nurses. This offer was given consideration by representatives of the State Educational Department, State Health Department, State Hospital Association, the licensed practical nurse, and the Arkansas Medical Society. After studies, it was the opinion of the committee that there was a defi-

nite need for additional practical nurses and that the Kellogg grant would be acceptable in establishing the schools for the training of practical nurses. Considerable time was spent in determining the needs and facilities for the schools in various sections of the state. It was also the opinion that it would be preferable to have a few schools well supervised than to have numerous scattered schools over the state. Personnel and sites have been selected and the first schools were ready January 15, 1952. It is interesting to remember that the Kellogg Foundation will continue financial assistance for two to three years.

(2) The second major effort has been to provide additional educational facilities for the licensed practical nurse who desires additional study and training. It is gratifying to report that the first school for the licensed practical nurse was opened this January. Even though the licensed practical nurse has been licensed, she will receive a certificate upon completion of this additional postgraduate work.

The help of Dr. Charles Henry and his advice given at many of the meetings is deeply appreciated.

COMMITTEE ON POSTGRADUATE EDUCATION

ALFRED KAHN, JR., Chairman

Your Committee on Postgraduate Medical Education has had a very serious problem this year. Although a meticulous effort was made by Dr. Willis Brown, the coordinator of postgraduate medical education, to find out what courses the Medical Society would like to have offered by the University, the attendance at the meetings has been very poor.

You will recall that prior to the start of the courses this fall, Doctor Brown sent a questionnaire to every physician in the state asking him what courses he would like, how long he would like the courses to last, and on what days he would like for the courses to be held. All of the answers were assembled and Doctor Brown set his courses up in accordance with the preferences expressed by all of you. Whereas approximately 20 per cent of the physicians in Arkansas attended last year's postgraduate medical sessions, this year the attendance has been deplorably bad. In some instances only one person has signed up for the course. Because of this, several meetings were held between Doctor Brown, representing the coordinator's office, Dr. C. A. Archer, Jr., representing the Arkansas Academy of General Practice, and myself, representing the Committee on Postgraduate Medical Education. These meetings did not produce any satisfactory solution for the poor attendance and it was decided to try and get a consensus from practitioners over the state as to why the program was doing poorly.

A meeting was held with members of the Arkansas Academy of General Practice, Education Committee, and the Postgraduate Medical Education Committee of the Arkansas Medical Society. A number of suggestions were made as to why the program was failing. The consensus seemed to be that one of the biggest deterrents in putting on the postgraduate programs was having too little available funds to put the program on; because of this, an advance registration was asked and a small tuition fee. It was felt that if no advance registrations were required, physicians might drop in at these meetings at the last minute and thus boost the attendance considerably. On the other hand, there are no funds available to act as a cushion in preparing the meeting, and none are in sight unless the Arkansas Medical Society and the Arkansas Academy of

General Practice decide to support this program. One question that might be raised here is, does the Medical Society want federal support to continue this program? Other points that were discussed were that the meetings were all business and had too little sociability; some type of entertainment to attract the wives was mentioned. Another cause of the poor attendance was the poor roads leading from certain areas of the state to Little Rock. One doctor felt that Little Rock as a community did not offer any inducements to come to meetings such as Dallas, Shreveport, and other communities had done; he had in mind entertainment for the physicians and their wives, style shows, chamber of commerce publicity, a more progressive spirit in the community as a whole, etc. It was also pointed out that poor attendance might also be attributed to the fact that transportation and communication is vastly superior and physicians can go to large cities and hear famous name physicians put on programs almost as easily as they can come to Little Rock. Several of the physicians felt that there were too many programs during the year, and one or two good programs per year, or even four, would be more in keeping with what the average Arkansas physician wanted.

Serious consideration by the Medical Society should be given to the failure of the postgraduate medical program. If the Medical Society feels that this is worth continuing, then funds for its continuance should be made available.

REPRESENTATIVE, ARKANSAS COMMITTEE FOR IMPROVEMENT OF NURSING SERVICE

SAM B. THOMPSON

As representative of the Arkansas Medical Society to the Arkansas Committee for the Improvement of Nursing Service, I have had occasion to attend one meeting of this committee, which was largely for the purpose of indoctrination of the members of the committee. It was the opinion of the Society's representative that the measures being advocated by this committee were in line with the principles of the Arkansas Medical Society and it is our recommendation that approval be given to the Arkansas Committee for the Improvement of Nursing Service.

COMMITTEE ON VETERANS ADMINISTRATION

EDWIN F. GRAY, Chairman

The Arkansas Medical Society Committee on Veterans Administration wishes to report the following activities during the year of 1951-52:

1. All committee members were contacted regarding their appointment and asked for suggested items for consideration.

2. Letters were sent to the Veterans Administration hospitals informing them of the committee members and stating our willingness to cooperate in any desired manner.

3. The following resolution adopted by the American Association of Physicians and Surgeons at their annual meeting in 1951 was sent to all members for their study, with no action taken:

WHEREAS, the members of this association are in full agreement that veterans should receive the highest quality of the medical and hospital care for service-connected disabilities, and

WHEREAS, the present Veterans Administration Act permits medical treatment of veterans with non-service-connected disabilities by the Veterans Administration.

THEREFORE, BE IT RESOLVED that we, the members

of the Association of American Physicians and Surgeons in regular session assembled this 6th day of October, 1951, urge the Congress of the United States to amend the present Veterans Administration Act to provide medical and hospital care to veterans for service-connected disabilities only.

BE IT FURTHER RESOLVED that a copy of this resolution be spread upon the minutes of this meeting and that copies be sent to (1) all members of Congress and (2) all state and county medical societies.

4. Conferences were held with veterans who were members of the American Legion, Arkansas Public Expenditure Council, Pulaski County Medical Society and Arkansas Medical Society. The members were unofficially designated to represent these groups, but a study was made to investigate the possibility of having official representatives form such a group for complete study of the veterans' affairs.

5. A conference was held with Mr. Don R. Wilson, National Commander of the American Legion, at which time various Veterans Administration policies were discussed. This conference consisted of the American Legion, in addition to members of the medical profession.

6. The committee was represented at the Midwinter Conference of the Arkansas Department of the American Legion.

It is recommended that this Committee on Veterans Administration continue to cooperate with other allied groups to further study the Veterans Administration functions so that the highest quality medical care may be provided for the veterans entitled to such services.

It is further recommended that physicians be urged to join the veterans' organizations and participate in their functions as a cooperative measure between the veterans' organizations and the medical profession.

COMMITTEE ON INDUSTRIAL HEALTH

L. P. GOOD, Chairman

The Committee on Industrial Health was slow to start activities due to lack of knowledge of its function. As soon as the functions of the committee were known, the following was done:

1. A survey of existing manufacturing companies was made and health hazards catalogued.

2. Investigations of health hazards due to overcrowding in three sections of the state were investigated at the request of the A.M.A. Council on Industrial Health. In some areas the water supply was short and sewerage disposal systems inadequate for the sustained load due to increase in population. Cities in these areas were conscious of these shortcomings and were making plans to correct the deficiencies. Housing was tight but not deleterious to the health. Ample doctors were available to give adequate medical care.

Hazards in mining camps and other manufacturing concerns had already been corrected.

Most of the manufacturers are small and health problems are pretty well worked out by management and labor mutually.

LIAISON COMMITTEE WITH THE ARKANSAS STATE BOARD OF HEALTH

HOYT R. ALLEN, Chairman

The Liaison Committee with the Arkansas State Board of Health wishes to report that no events occurred which required action by the committee with the State Board of Health.

STATE MEDICAL BOARD OF THE ARKANSAS MEDICAL SOCIETY

JOE VERSER, Secretary

The Secretary of the State Medical Board makes the following report of the activities of this Board since the last meeting of the Arkansas Medical Society.

The officers of the Board are as follows: G. D. Murphy, Jr., President; M. L. Harris, Vice-President, and Joe Verser, Secretary-Treasurer.

The Secretary has prepared a duplicate file on every physician licensed by this Board. This duplicate file has been placed in a fireproof vault, and shall be maintained in order to assure a permanent record on past and future licentiates of this Board.

Two physicians were summoned before the Board at its November meeting to answer charges of violation of the state's Barbiturate and Benzedrine Law. No action was taken against these individuals since both agreed to stop the indiscriminate use of these drugs. The Secretary will endeavor to mail a copy of this law to each licentiate of this Board within the near future in order that physicians can become better acquainted with this act.

Medical jurisprudence and pediatrics have now been included as examination subjects, and with the addition of these the twelve subjects now given conform with those given by the National Board.

Four applicants out of a total of eighty taking the June examination failed to pass. These four were allowed to take the November examination and all successfully passed.

The Secretary met with the Council of the Arkansas Medical Society in October and gave a report of the Board's activities for the past year.

Following is a report of Board proceedings—March 1, 1951, to February 1, 1952.

Physicians registered for 1951:

Resident	1,043
Non-resident	315
Physicians licensed by examination	83
Physicians licensed by reciprocity	43
Physicians certified to other states	65

Revoked for non-payment of annual registration fee Incomplete

Suspended for non-payment of annual registration fee Incomplete

Physicians placed on probation for violation of Federal Narcotics Act 2

Court convictions obtained for violation of Medical Practice Act 0

Cases pending for violation of Medical Practice Act .. 1

Licenses revoked for violation of Federal Narcotics Act 1

Following is a financial report covering the period March 1, 1951, to February 1, 1952. A yearly audit by a certified public accountant will be made in June, 1952.

Cash on hand, March 1, 1951	\$12,455.09
Bonds—Series E, purchase price	6,000.00
Collections from the following:	8,682.60

Registration fees	\$3,632.60
Reciprocity fees	2,425.00
Certification fees	990.00
Primary examination fees	645.00
Final examination fees	975.00
Duplicate certificates	15.00

TOTAL \$8,682.60 \$27,147.69

Expenditures:

Salary—Secretary and expense of Board members	\$4,831.79	
Attorney fee, travel expense to meetings	675.00	
Office rent	165.00	
Dues to Fed. of State Board of U. S.	75.00	
Office expense—printing, tele., post., frt. stationery, bond, lock box rent, etc.	1,053.48	
Refunds	122.00	
C.P.A. audit	100.00	
	<hr/>	
	\$7,022.27	
Total expenditures	7,022.27	
Bonds on hand	6,000.00	
Cash balance in bank	14,125.42	
	<hr/>	
	\$27,147.69	

MEDICAL EDUCATION COMMITTEE

JOHN H. WILSON, Chairman

The Committee on Medical Education has consisted of the following members this past year: Doctors Gene Gladden, Harrison; C. C. Long, Ozark; D. A. Autry, Peter O. Thomas, Willis E. Brown, Little Rock; Ellis Gardner, Russellville; R. C. Dickinson, Horatio, and John H. Wilson, Magnolia.

Since the Medical Foundation Hospital's organization and finances had been settled the previous year, there was not as much for the Medical Education Committee to do this year.

The first committee meeting of the year was held at the Albert Pike Hotel on September 22, 1951, with Doctors John H. Wilson, Ellis Gardner, Gene Gladden and D. A. Autry; Dr. Hayden C. Nicholson, Dean of the University of Arkansas School of Medicine; Mr. Paul C. Schaefer, Executive Secretary, Arkansas Medical Society; Dr. Charles Henry, President of the Arkansas Medical Society, and Dr. Louis K. Hundley, Chairman of the Council, and Dr. Joe Hardin, a member of the State Board of Medical Examiners.

A motion was made and unanimously carried that the committee go on record as approving the action of the State Board of Medical Examiners and as complimenting this Board for the care and caution which it has exercised in issuing licenses. A motion was also made and unanimously carried that the committee recommend to the Council of the Arkansas Medical Society that it approve the action of Dr. Nicholson wherein he fills residences and subordinate teaching positions by graduates of schools approved or recommended by the Council of Education of the American Medical Association. The committee unanimously approved a motion that a letter be sent to Dr. Webster Jones expressing appreciation for the interest and time that he has personally bestowed in promoting the welfare of the Medical School.

The chairman of the committee attended the groundbreaking ceremony on October 6, 1951, for the new teaching hospital for the University of Arkansas.

The people of Arkansas are indebted to Dr. W. R. Brooksher, the Council, and many others for the continued interest in medical education.

LIAISON WITH ARKANSAS DENTAL ASSOCIATION

JOHN E. GREUTTER, JR.

As Representative of the Arkansas Medical Society to the Arkansas Dental Association this is to report that no activities requiring liaison between the two groups has been necessary during the past year since my appointment.

HOSPITAL RELATIONS COMMITTEE

A. S. KOENIG, Chairman

In September, 1951, there was referred to the Hospital Relations Committee a list of grievances which existed between physicians in Eureka Springs, Arkansas, and the Carroll County Hospital of that city. The activities of the committee for the year have been devoted almost entirely to settling the difficulties which existed in that community, and in conducting our investigations and hearings the committee worked in close cooperation with the Professional Relations Committee of the Arkansas Hospital Association.

The recommendations which were finally made in this dispute were arrived at through the joint efforts of these committees, and it is felt that an amicable settlement has been achieved. As a result of the problem which was presented to the Hospital Relations Committee in this particular dispute, the following recommendations are made to the House of Delegates of the Arkansas Medical Society:

1. It shall be considered desirable that in any dispute involving physicians in the state and hospitals that the Hospital Relations Committee of the Arkansas Medical Society work in close cooperation with the Professional Relations Committee of the Arkansas Hospital Association. By so doing an element of control and supervision can be utilized over hospitals.

2. The Legislative Committee of the Arkansas Medical Society should review Act 481 of the 57th General Assembly and Act 118 of the 58th General Assembly which outline the administrative control of county hospitals within the state.

The reason for the second recommendation is that in the dispute that was brought to this committee's attention in the past year it was felt that if the Board of Governors of a county hospital could be selected on the basis of some form of popular vote or election, rather than being appointed by the county judge, there would be removed some element of political influence in the administration of county hospitals. Under the present laws the Board of Governors are all appointed by the local county judge and in the final analysis the county judge exerts absolute control over the hospital administration. The committee has not attempted to revise or make recommendations as to how the laws should be changed, but it is felt that the law should be reviewed by the Legislative Committee and the proper changes suggested. The Professional Relations Committee of the Arkansas Hospital Association concurred with this committee's sentiments regarding the law and it is felt that if both the Arkansas Medical Society and the Arkansas Hospital Association worked together in this matter, a more equitable control of county hospitals may be devised. The reports and recommendations of the investigations and complaints need not be reviewed in this report. They are on file with the chairman of the Committee on Hospital Relations.

CANCER CONTROL COMMITTEE

JAMES H. GROWDON, Chairman

As in past years the activities of this committee have been largely in association with the State Cancer Commission and the Arkansas division of the American Cancer Society. Members of the committee who serve on the Board of the Arkansas Division of the American Cancer Society have actively participated in the program and are cooperating wholeheartedly in the splendid work of this organization.

The chairman of the committee has served as your representative on the State Cancer Commission. The role of this agency continues to become increasingly important and beneficial to the public and physicians of the state alike. The Association of Tumor Clinic Staff Physicians has continued its activities in improvement of the several commission-sponsored cancer clinics of the state and in professional education. Scientific programs have been presented in Pine Bluff, Texarkana and Little Rock. These meetings have featured out-of-state speakers of national prominence as well as outstanding in-state speakers. The Cancer Bulletin, Arkansas Edition, sponsored by the Cancer Commission and the Arkansas Medical Society, is being distributed free of charge to 1,200 physicians over the state. A recent survey by mail of the physicians of the state indicates an overwhelming approval of this policy and it is planned to continue sending this bulletin.

ARKANSAS STATE CANCER COMMISSION

CARL A. ROSENBAUM, Secretary

Increased interest and activity in service to the cancer patient—particularly the indigent cancer patient—stand out in the program of the Arkansas State Cancer Commission in its seventh year, which concludes June 30, 1952.

Rapid growth of the program is indicated by the number of patients receiving services each year since the State Cancer Commission was established as the official state agency responsible for the cancer control program in Arkansas, created by Act 277 of the 1945 General Assembly.

Comparison of patient figures by years may be made as follows:

65 patients	1945-1946
451 patients	1946-1947
718 patients	1947-1948
805 patients	1948-1949
1,196 patients	1949-1950
1,967 patients	1950-1951

All 75 counties of Arkansas are represented in these 1,967 patients provided with services of diagnosis, treatment and/or hospitalization and related services. They fall into these age groups:

62 from	1 to 25 years of age
553 from	26 to 50
1,318 from	51 years and over

They represent 1,400 white and 562 Negro patients; 817 males and 1,150 females.

Seven Tumor Clinics

The seven Tumor Clinics, designated by the State Cancer Commission as being qualified for and as having adequate facilities for the diagnosis and treatment of cancer, and their active cancer case loads as of January 1, 1952, are as follows:

University Hospital, Little Rock	1,984
St. Vincent's Infirmary, Little Rock	470
Bowie-Miller Counties Medical Society Tumor Clinic, St. Michael's Hospital, Texarkana	375

Southeast Arkansas Tumor Clinic, Davis Hospital, Pine Bluff	223
Northeast Arkansas Tumor Clinic, St. Bernard's Hospital, Jonesboro	158
South Arkansas Tumor Clinic, El Dorado	115
Sebastian County Tumor Clinic, Fort Smith	107
(This clinic meets on alternate Tuesdays at St. Edward's Mercy and Sparks Memorial Hospitals.)	

These Tumor Clinics received American College of Surgeons approval in 1950, and were inspected by a representative of the College again in October, 1951.

Hospitalization and Radio-Active Therapy

During the fiscal year July 1, 1950-June 30, 1951, 626 admissions to hospitals were arranged and financed for indigent cancer patients by the State Cancer Commission.

Funds of the State Cancer Commission provided radio-active materials, still in the experimental stage, for several patients during the past 18 months at University Hospital Tumor Clinic. These include iodine for two males and one female with diagnosis of carcinoma of the thyroid gland; phosphorus for two females, diagnosed as polycythemia vera, and one female, whose diagnosis is eosinophilic granuloma. Radio-active gold is being used in the treatment of a female patient at the same clinic now, whose diagnosis is metastatic adenocarcinoma of the ovary.

Gold radon seeds have been purchased for a University Hospital male patient with carcinoma of the naso-pharynx, and for a female patient at St. Vincent's Tumor Clinic, diagnosed as carcinoma of the tongue. At the latter clinic, platinum radon seeds were provided for a male patient with carcinoma of the tongue.

Central Cancer Registry

The Central Cancer Registry, supervised and staffed by State Cancer Commission personnel and housed at University Hospital, contains over 3,000 active patient files. It is maintained as an administrative tool in the program of service to the cancer patient, and as a source of morbidity data.

A follow-up project to secure information on 1,421 cancer patients admitted to the Tumor Clinic at University Hospital from January 1, 1940, to July 15, 1947, has been conducted with 1,162 patients traced.

Information pertaining to primary site, method of diagnosis, therapy, and end results was prepared and furnished for doctors affiliated with the University of Arkansas, School of Medicine, including a survey on "Carcinoma of the Stomach." Such information was also available to medical students, who were interested in carcinoma of the esophagus.

Follow-up information on cancer patients has been provided at the request of other state cancer control facilities, including Tennessee, California, Kansas and Louisiana.

During the fiscal year, July 1, 1950, through June 30, 1951, 1,130 requests for public health nursing follow-up service were made to the State Health Department, when follow-up procedures in the Tumor Clinic offices and the Registry were not successful. Of these 1,130 requests, 666 were answered with information or by contact with the patient; 464 requests were not answered.

Professional Education

An opinion survey concerning THE CANCER BULLETIN, a medical publication designated to stimulate cancer case-finding, was conducted by the State Cancer Commission to determine the effectiveness of its distribution to 1,200 doctors in Arkansas by the Commission, assisted by the Committee on Cancer Control, State Medical Society.

Endorsement of THE CANCER BULLETIN as a good media in professional education was obvious by the results of the survey, tabulated as follows:

Arkansas physicians queried	1183	
Replies received	826	
Reply percentage		69.82%
Nature	No. of	Percent of
of Response	Replies	Total Response
Favorable comment ..	764	64.58%
Unfavorable comment ..	35	2.96%
Comment not applica- ble (i.e. moved from state, deceased, re- tired, etc.)	24	2.03%
No comment	3	.25%
No replies	357	30.18%
Physicians requesting continuation of THE CANCER BULLETIN	779	
Physicians requesting discontinuation of THE CAN- CER BULLETIN	47	

Most of the 2.96% unfavorable comment questioned whether the cost of the publication justified its distribu- tion. The cost of THE CANCER BULLETIN to the State Cancer Commission is .27¼ cents per copy, plus postage, and it is distributed bimonthly.

At the last mid-winter scientific session of the Asso- ciation of Tumor Clinic Staff Members in Arkansas, held at Little Rock the last day of January, Dr. C. H. Frank of Texarkana was elected Association Chairman to suc- ceed Dr. Fred Hames of Pine Bluff. The Association, organized in March, 1949, with membership including staff members of the seven Tumor Clinics, meets three times annually, with out-of-state specialists in the fields of surgery, X-ray and radium therapy, and research, guest speakers, with Arkansas doctors and staff members of the University of Arkansas, School of Medicine, participating.

Professional groups and medical societies have shown unusual interest in requesting professional films, including the series on "The Problem of Early Diagnosis" of which the No. 4 film, "Uterine Cancer," is the latest.

Personnel Practices

Improving personnel practices of the State Cancer Com- mission, which is a member agency of the Arkansas Merit System Council, an In-Service Training Program for Tumor Clinic Secretaries and clerical personnel was inaugurated in October at the Central Office and the Central Cancer Registry, Little Rock, to emphasize the importance of performance and procedures.

The State Cancer Commission participates in the orientation program of the State Health Department for new nursing personnel.

Services for Indigent Cancer Patients

Services provided for indigent cancer patients and co- ordinated through the State Cancer Commission program may be listed as follows:

Referral to a Tumor Clinic, designated by the State Cancer Commission, located nearest the patient's home.

Diagnosis and/or Treatment by doctors, who make up the Basic and Consultant staffs in the Tumor Clinics and have been selected to serve on a voluntary basis from membership of Medical Societies in the respective coun- ties of the Tumor Clinics and from the hospital staffs, where the Tumor Clinics are located.

Diagnostic procedures with funds of the State Cancer Commission.

Hospitalization with funds of the Cancer Commission paying a per diem not to exceed a maximum of 21 days in any one hospital term.

Out-Patient care for ambulatory patients, receiving treatment at the Tumor Clinic or reporting for follow-up,

not to exceed 30 days in any one term with funds from the Arkansas Division, American Cancer Society. (Effec- tive July 1, 1951, funds of this agency were not made available to provide transportation).

Follow-up visits to the Tumor Clinic at regular intervals.

Follow-up by correspondence with Tumor Clinic Secre- tary, arranging for clinic appointment, inquiring state of patient's health and securing information for or from patient's doctor.

Nursing service follow-up by public health nurse through the cooperation of the State Health Department when other follow-up procedures in the Tumor Clinic office and Central Cancer Registry have not been successful.

Bedside nursing by Visiting Nurse Association in Greater Little Rock.

X-ray therapy through the generosity of private radio- logists and hospitals owning and operating X-ray therapy machines.

Radium, radon seeds and needles, and radio-active ma- terials by State Cancer Commission.

TUBERCULOSIS COMMITTEE

J. D. RILEY, Chairman

No current problems have been referred to our com- mittee and no active action has been taken.

We have cooperated with the members of the Medical Society, the sanatoriums of Arkansas and the Tuberculosis Control Division of the State Health Department.

REPORT OF THE EXECUTIVE SECRETARY

MR. PAUL C. SCHAEFER

The year 1951 saw the departure of the Executive Secre- tary, Mr. Wrightsman, and the employment of the under- signed to fill the vacancy. Your present Executive Secre- tary took over his duties from his predecessor on July 1, 1951.

The ensuing nine months, spent under the guidance, and with the encouragement, advice and understanding of Dr. Brooksher, have been a most profitable and interesting period.

In 1951 the Arkansas Medical Society had 1,049 dues- paying members. This number, with 64 Life Members and 17 Affiliate Members comprise a total active member- ship of 1,130.

The official tabulation of members who are also members of the American Medical Association lists 803 names for the year.

On the first of August your Society Headquarters office was moved to a modern, air-conditioned office building, where the same amount of space is used for a rental of \$50, a saving of \$20 per month. With all of the other costs of operating the office rising inexorably we con- sidered it a fortunate circumstance to be able to effect a saving and at the same time occupy vastly more desirable quarters.

One of the first steps taken to increase the usefulness of your headquarters office was to expand and revitalize our service to physicians seeking a place to practice medi- cine in Arkansas. Several surveys were made to learn of the localities in the state which needed a doctor. The University of Arkansas School of Medicine, the Secretary of the State Medical Board and the Constitutional Secre- tary all cooperated in channeling all inquiries to the head- quarters, making possible a coordinated and more effec- tive placement service. Headquarters office answered 25 inquiries from doctors seeking locations during 1951 and 34 requests for assistance from towns in need of a phy- sician. A great many follow-up letters were written in efforts to get the two together. A booklet was compiled

of all the places offering opportunities to practice medicine and distributed to inquiring physicians. The number of inquiries being received is increasing at a highly satisfactory rate.

In order to have more complete information on our membership on file for public relations and educational uses, your headquarters has begun the establishment of an individual file on each member. This file will contain a list of the business, professional and fraternal organizations to which you belong, an account of any special honors awarded you, your accomplishments, specialties and as complete a biography as we are able to obtain. This project will take a long time to complete, but should prove of great value to the Society.

Your Executive Secretary looks back on a period of pleasant, stimulating association with the officers and members of this Society. He looks forward to another year of increasing the usefulness of his office to the Society and extending its functions within necessary budget limitations.

PUBLIC RELATIONS COMMITTEE

F. G. KUMPURIS, M. D., Chairman

Dear Dr. Henry: The Public Relations Committee of the State Medical Society for the past year has not been an actively functioning committee in the directions in which it was intended, namely, that of aiding in the Public Relations of the physicians and their patients throughout the state. The reason for this will be covered in the subsequent paragraphs. It is my opinion that the public relations committee in the future should be without a doubt the most important committee in the State Medical Society program and as such should be one deserving of a tremendous amount of attention at the next meeting at the house of delegates in April at the State Medical Society meeting.

As you recall when you asked me to be chairman of the Public Relations Committee I stated that I would accept only on the basis that I would be able to lay the groundwork as much as possible for the creation of a bona fide Public Relations Department in the State Medical Society's office. Efforts in this direction were carried out during the tours of the Medical Society officers and chairmen to Rogers, Batesville, Jonesboro, and the views of those members of the Medical Societies and districts were aired by the travelling representatives of the Society. It was most encouraging to have listened and discussed the views of the members of the Society in regards to the subject of public relations.

In view of the fact that the travelling emissaries of the Society were unable to complete their tour of the southern part of the state and of the district of Little Rock I will have to repeat some of the points which were brought out in the northern circuit.

The Honorable Governor of Oklahoma at a recent meeting in Tulsa was very fair to the physicians of Oklahoma when he stated it would be very surprising and very discouraging if the populace as a whole were able to vote on whether or not they would like to have socialized medicine. He granted that the American Medical Association has been extremely successful in forming a political block and accepted that the war has been a tremendous help in adding another block towards the President's being able to bring about a Socialized Medicine program, but he feels that the physician has completely neglected the greatest weapon which he has, namely, that of the relationship with his patient. I feel that Governor Murray of Oklahoma has perhaps expressed the true fears of all physicians in the State of Arkansas when they consider the future medicine in this State. Namely, what would their patients do should

they be permitted to vote on the subject of whether or not they would like to have Government medicine.

The public has for some reason seen fit to demand extra attentions from all types of business. The tremendous neglect which they suffer as a result of a tremendous demand and a poor supply during the war years with the insulting attitudes of clerks in department stores and the clerks in the grocery store, and all other types of businesses was seen to change in the post-war period when the supply began to meet the demand and it was necessary to place articles on a competitive basis. At this point the public began to reap its reward of waiting and has demanded of all businesses more courtesies and more bargains on the part of their product. This, in spite of the fact that the price of the articles which they buy today may be 200 per cent higher than they were in 1940. Business has seen that this problem is somewhat brought under control by its public relations program and emphasis of courtesy on the part of the employees to the customer and through advertising and radio commercials and promotion stunts and good will projects so that the customer is very pleased now in spite of the fact that he was very vengeful after the war and seek more courtesy in the buying of the produce.

As a business, medicine was equally affected during the war years. People began to demand in the post-war years, that physicians be more attentive, that physicians make night calls at the drop of a hat, that physicians' fees stay within reason of what they thought was a reasonable fee and that appointments in offices be kept so that patients would not have to wait several hours. To me this seems a reflection of the same type of idea that the general public had in relation to the products which they sought during the war at which time the demand was far greater than the supply. Big business has answered this problem in the State of Arkansas far better than the physician has answered it in the State of Arkansas. The instrument which big business has used in answering this problem has been that of public relations well organized and well financed through individual businesses and through individual programs in each respective business. Today a business on Main Street will spend from five to seven per cent of their gross income for advertising and public relations.

Medicine has fallen by the wayside in its efforts to carry on a well organized public relations program in order to increase and better the relations of the doctor and the patient. The patient has had a freedom of speech and complaint over the last ten years which has been well voiced and well heard by all of us in the medical professions. Their complaints are, for the most part, not well founded and we as physicians look upon them as perhaps the complaint of a child who perhaps does not understand the entire circumstance and yet we don't care to scold the child for fear that he might develop a neurosis in later life. Many physicians, in their own individual practices, carry on a public relations program of their own and this in the 1,200 various offices of doctors in the State of Arkansas will vary in degree perhaps in 1,200 various amounts. There are those doctors who carry on no public relations in their offices, and there are those, who, on the other extreme are very cognizant of public relations and have a well rounded type of relation with their patient. However, in spite of the relations which a patient and doctor have in an individual practice the complaints which are offered by the patients in general are a reflection upon the Medical Society in general and as a result a reflection on all doctors regardless of the manner in which they themselves practice their medicine.

Medicine itself is a big business, a big business which, in the State of Arkansas results in a net income collectively

of \$10,000,000 a year. This figure is based on the average income of physicians as issued by the Internal Revenue Department for the year of 1949 for the physicians of Arkansas. This represents a big business when one considers profits of \$10,000,000 of dollars. Therefore, as a big business we should begin to consider its operation as a big business. Such a business should have not a doctors' committee on public relations which will attempt in its inexperienced manner to carry on a public relations program but in its stead it should have a professional public relations program headed by a public relations director with suitable funds to carry out a program which would reflect a better relationship between doctors and patients for all physicians in the State of Arkansas. Such a program could well publicize the good deeds of the doctors of our State of Arkansas. Such a program could survey the various communities of the state and find when the need of physicians is the greatest and encourage our young doctors to service those communities. Such a program could organize and carry out a program of better relationship for the doctor to practice with his patients in his office from the standpoint of issuing bills, collecting bills, or having an organized night call service for the community and of having other problems which periodically arise between the doctor and the patient answered on a fair and satisfactory basis for both the physician and the patient. Such a program could continue to carry on the program as started by the Rural Health Committee this past year to equal heights and perhaps greater heights than the terrifically successful program of 1951. Such a program could aid the Medical Society in its legislative programs at the State House every two years and have a well organized doctors' bloc in the State of Arkansas. Such a program could make use of the many newspapers in our State who are willing to give doctors good publicity if the doctors would only submit the material for the good publicity, but as physicians they do not have the time nor the ability to submit such material for publication for their better relations with the patients. Such a program could advantageously utilize the free time which radio stations in our state are offering doctors for the purposes of carrying on programs which in the end would result in a better relationship between the doctor and the patient. Such a program could by its own existence measure the level of relationship that exists between the doctor and patient and compare it from year to year to see if such relationship is getting better or worse, something which we have no measuring stick for today. Such a program would enable the doctors in the State of Arkansas to have an organized office whereby they may submit their own ideas for a better program in itself of public relations which in our tour of the northern counties we found existed. Many physicians in our state have excellent ideas and new ideas on how the public could be best served by the physician and at the same time serve as an aid in public relations. Such a program could publicize to the public our grievance committees which exist in the state and on our county level so that the public would feel that we are sincere in wanting to have a better relationship with them and so that the public could have a better understanding of where they could take any grievance to be heard and to be decided as to its legitimacy.

The Medical Society of the State of Arkansas and the County Medical Society along with the American Medical Association have a combined dues of \$70.00 a year which includes the Journal of the American Medical Association. To each and all of us \$70.00 represents a fair figure of monies. No one will say that \$70.00 is a small amount of

monies. The necessity of these monies is known by all of us and the service which that sum offers us as physicians is realized by all of us to be tremendous. However, there are not enough funds left over after these funds are utilized to finance a public relations program of a professional type for our state. It is therefore recommended by this committee to the house of delegates that they seriously consider either a voluntary donation on the part of the members of the State Medical Society, or an assessment on the part of the members of the State Medical Society, or an increase in dues to the members of the State Medical Society, a sum of \$25.00 per member to give the state treasury a total of between \$25,000 and \$30,000 a year to be used to hire professional public relations personnel and a secretary for this public relations director to carry on a full time public relations program for the Arkansas State Medical Society. This would allow such a department sufficient funds to carry on programs of fairly large magnitude throughout our state and not necessitate the deprivation of funds from our State Medical Society treasury which are needed for other projects which have been existent for many years. The committee on public relations and its chairman feel that this program is one which will bring immeasurable benefit to all physicians of the State of Arkansas in a very short time after such a program can be put into effect, and that the true benefits of such a program, if well organized and coordinated will be a very obvious effect in the matter of two years.

The chairman of the Public Relations Committee feels that if such a program is adopted by the house of delegates of the State Medical Society that the year 1951 and the year 1952 will be remembered as milestone years in our medical society, a milestone for a beginning of a new progress period in a better understanding of the doctor of the patient, and the patient of the doctor.

REPORT OF THE PROCUREMENT AND ASSIGNMENT COMMITTEE

FOUNT RICHARDSON, Chairman

The activity of the State Procurement and Assignment Committees has not been great during the past twelve months. Only a few sporadic cases have been brought to the attention of the committee as most of the requirements of the armed services have been filled by volunteers.

It is common knowledge that out of the entire country only two physicians have been drafted and the Selective Service has seen fit to withhold their action on registrants who are classified I-A and give them a chance to volunteer, which allows the physician or dentist to enter the service in a much better situation.

It is not known at this time what the demands of the services will be. There is some indication that there will be new calls for medical and dental officers in August or September of this year, as a great many of the volunteers are finishing up their allotted time in the service. With that in mind, the committee may expect some renewed activity by July of this year.

The chairman of the Advisory Committee wishes to thank the component members for handling this unpleasant task without fail and without hope of any thanks or reward, except that which comes with any job which is well done.

PRELIMINARY PROGRAM

ARKANSAS MEDICAL SOCIETY SEVENTY-SIXTH ANNUAL SESSION

Hotel Marion, Little Rock, Arkansas
April 21-22-23, 1952

April 21, 1952

- Opening Session Marion Hotel, 9:30 A. M.
Invocation: The Rev. Richard Hardie, Pastor, Westover Hills Presbyterian Church, Little Rock, Arkansas.
President's Address—Charles R. Henry, M.D., Little Rock, Arkansas.
Presiding—Scientific Session—John H. Wilson, M.D., Magnolia, Arkansas.
9:45-10:15 "The Indications for Bronchoscopy and Bronchography in Pulmonary Disease"—Herman J. Moersch, M.D., Mayo Clinic, Rochester, Minnesota.
10:15-10:20 Discussant: Fred Gray, M.D., Little Rock, Arkansas.
10:20-10:50 "Metabolic Bone Diseases"—Edward C. Reifstein, M.D., Director of Research, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.
10:50-10:55 Discussant: S. B. Thompson, M.D., Little Rock, Arkansas.
10:55-11:15 "Present Day Treatment of Liver Diseases"—Alfred J. Kahn, M.D., Little Rock, Arkansas.
11:15-11:45 "Subacute Bacterial Endocarditis"—Thomas H. Hunter, M.D., Assistant Dean, Washington University School of Medicine, St. Louis, Missouri.
11:45-11:50 Discussant: John W. Ashley, M.D., Newport, Arkansas.
12:15- 1:30 Dutch Treat Luncheon—Everyone Invited. Coach Room, Hotel Marion. Moderator: S. C. Monroe, M.D., Pine Bluff, Arkansas.

GENERAL SESSION

Ballroom, Hotel Marion

Monday Afternoon, 1:30 P. M., April 21, 1952

- Presiding: Frank G. Kumpuris, M.D., Little Rock, Arkansas.
1:30- 2:00 "Post-Operative Care to Prevent Recurrence of Kidney Stones"—Grayson Carroll, M.D., Department of Urology, St. Louis University School of Medicine, St. Louis, Missouri.
2:00- 2:05 Discussant: Carl L. Wilson, M.D., Fort Smith, Arkansas.
2:05- 2:35 "Recent Advances in the Surgical Management of Peripheral Vascular Diseases"—Gene B. Starkloff, M.D., Department of Surgery, St. Louis University School of Medicine, St. Louis, Missouri.
2:35- 2:40 Discussant: Henry M. Carney, M.D., Texarkana, Arkansas.
2:40- 3:10 "Eye Injuries"—James T. Allen, M.D., Professor of Ophthalmology, Tulane University, New Orleans, Louisiana.
3:10- 3:15 Discussant: Gardner H. Landers, M.D., El Dorado, Arkansas.
3:15- 3:45 "Diverticulitis of the Colon"—Harvey Stone, M.D., Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.
3:45- 3:50 Discussant: Louis P. Good, M.D., Texarkana, Arkansas.

4:00 P. M. House of Delegates.

9:00 P. M. Dance and Breakfast—Host, Pulaski County Medical Society.

GENERAL SESSION

Ballroom, Hotel Marion

9:30 A. M., Tuesday, April 22, 1952

Presiding: Charles R. Henry, M.D.

- 9:30-10:00 "Estrogen Therapy"—Laman H. Gray, M.D., Prof. OB-Gyn, University of Louisville School of Medicine.
10:00-10:05 Discussant: Walter Jones, M.D., Texarkana, Arkansas.
10:05-10:35 "Consideration of Obstetrical Bleeding"—Andrew A. Marchetti, M.D., Prof. and Chairman, Department OB-Gyn, Georgetown University School of Medicine, Washington, D. C.
10:35-10:40 Discussant: Eugene T. Ellison, M.D., Texarkana, Arkansas.
10:40-11:10 "Management of Breech Presentation"—Albert H. Aldridge, Chief Surgeon, Woman's Hospital in the State of New York, New York, New York.
11:10-11:15 "Discussant: Willis Brown, M.D., Little Rock, Arkansas.

Memorial Service—Ballroom, Marion Hotel

Tuesday, April 22, 1952, 11:30-12:00 A. M.

Presiding: Charles Reid Henry.

Invocation: The Very Rev. Cotesworth Pinckney Lewis, Dean, Trinity Cathedral, Little Rock.

Vocal Trio: Sacred Selection—Mesdames Jack Peele, Floyd Chronister, Bob Buice; Accompanist, Mr. George Miller.

Scripture Reading.

Memorial Address: The Rev. Mr. Lewis.

In Memoriam (reading of the names of the departed).

Vocal Trio: Sacred Selection.

Benediction.

Dutch Treat Lunch—Everyone Invited—Coach Room, 12:15-1:30. Moderator: Willis Brown, M.D., Little Rock, Arkansas.

GENERAL SESSION

Ballroom, Hotel Marion

Tuesday, April 22, 1:30 P. M.

Presiding: D. W. Goldstein, M.D.

- 1:30- 2:00 "Autonomic Nervous System"—Motion Picture—Joe Marque, M.D., Department of Anatomy, Duke University School of Medicine, Durham, North Carolina.
2:00- 2:20 "Skin Cancer"—Lawrence Zell, M.D., Little Rock, Arkansas.
2:20- 2:40 "Surgery of the Hand"—Kenneth G. Jones, M.D., Little Rock, Arkansas.
2:40- 3:00 "Accidents—Chief Cause of Deaths in Children"—Joseph L. Rosenweig, M.D., Hot Springs, Arkansas.
3:00- 3:20 "Therapy for the Relief of Asthma"—Cazort-Johnston, M.D., Little Rock, Arkansas.
3:20- 3:40 "Common Radiological Errors in General Practice"—I. Meschan, M.D., Little Rock, Arkansas.
3:40- 4:00 "Management of Diseases of the Thyroid"—William W. Nichols, Colonel, M.D., Hot Springs, Arkansas.
7:30 P. M. Annual Banquet and Dance—John W. Cline, M.D., President American Medical Association, Speaker.

GENERAL SESSION

Main Ballroom, Hotel Marion

Wednesday, April 23, 9:30 A. M.

Presiding: S. A. Drennan, M.D.

9:30- 9:50 "Recent Advances in Pediatric Surgery"—Joe

Buckman, M.D., Little Rock, Arkansas.

9:50-10:10 "A Report of the Arkansas Hospital and Medical Service"—Ellery C. Gay, M.D., and Mr. Jack Redheffer, Little Rock, Arkansas.

10:10-10:30 "Medullary Fixation of Long Bone Fractures"—John D. Christian, M.D.; Samuel B. Thompson, M.D., Little Rock, Arkansas.

10:30-10:50 "Prognosis of Heart Disease"—Robert Hood, M.D., Russellville, Arkansas.

10:50-11:10 "Surgical Management of the Prostate Patient"—Hugh F. Rives, M.D., Little Rock, Arkansas.

11:10-11:30 "Polypoid Disease of the Colon and Rectum and Its Relation to Cancer"—John Laurens, M.D., Little Rock, Arkansas.

1:30 P. M. House of Delegates.

SPECIAL SECTION PROGRAMS

SPECIAL SESSION ON INTERNAL MEDICINE

Coach Room, Hotel Marion

Monday, April 21, 2:00 P. M.

Presiding: R. E. McLochlin, M.D., Little Rock, Arkansas.

2:00- 2:30 "Steroids in the Treatment of Bone Diseases"—Edward C. Reifstein, M.D.

2:30- 2:45 Questions and Answers.

2:45- 3:15 "Medical Treatment of Suppurative Lung Disease"—Herman J. Moersch, M.D.

3:15- 3:30 Questions and Answers.

3:30- 4:00 "Indications and Contraindications for Use of Antibiotic Combinations"—Thomas J. Hunter, M.D.

4:00- 4:15 Questions and Answers.

EENT SECTION PROGRAM

Tuesday, April 22, 9:30 A. M.

Rendezvous Room, Hotel Marion

Chairman's Address—Dr. Ellis Gardner, Russellville.

"Pathological Findings on Eucleated Eyes"—Dr. John G. Watkins, Jr., Little Rock, and Dr. E. L. Wilbur, Little Rock.

(Discussion by Dr. J. F. Henry, Jr., Little Rock)

(Subject to be announced)—Dr. J. H. Allen, New Orleans.

Luncheon at 12:30 with Round-Table

Discussion and Business Meeting

"Allergies of the Ear, Nose and Throat"—Dr. French K. Hansel, St. Louis.

"Treatment of Paralysis of the Recurrent Laryngeal Nerve"—Dr. A. J. Brizzolara, Little Rock.

SPECIAL SESSION—SURGERY

Colonial Room, Hotel Marion

Tuesday, April 22, 1952, 9:30 A. M.

Presiding: Henry G. Hollenberg, M.D.

9:30-10:00 "Hernia"—Gene B. Starkloff, M.D.

10:00-10:15 Questions and Answers.

10:15-10:45 "Bladder Tumors"—Grayson Carroll, M.D.

10:45-11:00 Questions and Answers.

11:00-11:30 "Handling Acute Intestinal Obstructions"—Harvey Stone, M.D.

SPECIAL SESSION—OBSTETRICS AND GYNECOLOGY

Coach Room, Hotel Marion

Tuesday, 2:00 P. M.

Presiding: Eugene T. Ellison, M.D., Texarkana, Arkansas.

2:00- 2:30 "Total Hysterectomy"—Albert H. Aldridge, M.D.

2:30- 2:45 Questions and Answers.

2:45- 3:15 "Female Stress Urinary Incontinence"—A. A. Marchetti.

3:15- 3:30 Questions and Answers.

3:30- 4:00 "Indications for Gynecologic Surgery"—Laman H. Gray, M.D.

4:00- 4:15 Questions and Answers.

PRELIMINARY PROGRAM

TWENTY-EIGHTH ANNUAL SESSION WOMAN'S AUXILIARY TO THE ARKANSAS MEDICAL SOCIETY

Continental Room, Hotel Marion

Little Rock, Arkansas

April 21-22-23, 1952

OFFICERS

PRESIDENT—Mrs. James G. Martindale, 304 North Pine St., Hope, Arkansas.

PRESIDENT-ELECT—Mrs. Gordon P. Oates, 5001 Country Club Blvd., Little Rock, Arkansas.

FIRST VICE-PRESIDENT—Mrs. Joe Verser, Harrisburg, Arkansas.

SECOND VICE-PRESIDENT—Mrs. Howard S. Stern, 1800 West 25th St., Pine Bluff, Arkansas.

THIRD VICE-PRESIDENT—Mrs. R. C. Dickinson, Horatio, Arkansas.

FOURTH VICE-PRESIDENT—Mrs. Max F. McAlister, 18 East Dickson St., Fayetteville, Arkansas.

TREASURER—Mrs. V. T. Webb, 2823 West 14th St., Little Rock, Arkansas.

RECORDING SECRETARY—Mrs. Mason G. Lawson, 200 Ridgeway, Little Rock, Arkansas.

CORRESPONDING SECRETARY—Mrs. Jud B. Martindale, 614 West Ave. B., Hope, Arkansas.

PUBLICITY SECRETARY—Mrs. W. L. Shippey, 612 South 24th St., Fort Smith, Arkansas.

HISTORIAN—Mrs. C. W. Garrison, 491 Ridgeway, Little Rock, Arkansas.

PARLIAMENTARIAN—Mrs. E. D. McKnight, Brinkley, Arkansas.

POET LAUREATE—Mrs. George B. Fletcher, 18 Fern St., Hot Springs, Arkansas.

COUNCILORS

Mrs. Fred Hames, Rt. 2, Box 244, Pine Bluff.

Mrs. Walter J. Hunt, Warren.

Mrs. Mason G. Lawson, 200 Ridgeway, Little Rock.

Mrs. Louis K. Hundley, 25 Parkview Apts., Pine Bluff.

Mrs. Warren S. Riley, 806 N. Madison, El Dorado.

DISTRICT COUNCILWOMEN

District 1—Mrs. T. S. Hare, Crawfordsville.

District 2—Mrs. Martin C. Hawkins, Jr., 605 E. Race St., Searcy.

District 3—Mrs. Thomas S. VanDuyn, 305 East 6th, Stuttgart.

District 4—Mrs. James T. Rhyne, 2012 West 25th, Pine Bluff.

District 5—Mrs. John Schuler McKinney, 814 West 8th, El Dorado.

District 6—Mrs. Gerald H. Teasley, Forrest Road, Texarkana.

District 7—Mrs. John W. Dodson, 510 Ramble Road, Hot Springs.

District 8—Mrs. Donald W. Dykstra, 201 West F, Park Hill, North Little Rock.

District 9—Mrs. J. G. Gladden, Harrison.

District 10—Mrs. A. A. Blair, 710 S. 24th, Fort Smith.

ADVISORY COUNCIL

Dr. R. C. Dickinson, Chairman, Horatio.

Dr. R. B. Robins, 111 Van Buren St., Camden.

Dr. Melvin R. McCaskill, 711 West Capitol Ave., Little Rock.

COMMITTEE CHAIRMEN

ARCHIVES—Mrs. Joe Rushton, 312 West Union, Magnolia.
 BULLETIN—Mrs. C. A. Archer, Jr., 823 Donaghey, Conway.
 CANCER CONTROL—Mrs. Walter J. Hunt, 306 West Elm, Warren.
 CIVIL DEFENSE—Mrs. Louis K. Hundley, 25 Parkview, Apts., Pine Bluff.
 CONSTITUTION AND BY-LAWS—Mrs. P. H. Muse, Junction City.
 DOCTOR'S DAY—Mrs. Van C. Binns, Monticello.
 EDUCATION AND PUBLIC HEALTH—Mrs. Howard S. Stern, 1800 West 25th, Pine Bluff.
 ERLE CHAMBERS MEMORIAL LIBRARY FUND—Mrs. Paul M. Fulmer, 2700 Izard, Little Rock.
 EXHIBITS—Mrs. Ben D. Means—5912 Country Club, Little Rock.
 FINANCE—Mrs. Barton A. Rhinehart, Twin Lakes, Highway 10, Little Rock.
 ILSE F. OATES STUDENT LOAN FUND—Mrs. Charles E. Oates, 305 West Scenic Drive, North Little Rock.
 JANE TODD CRAWFORD MEMORIAL LOAN FUND—Mrs. John T. Gray, Old Flint St. Road, Jonesboro.
 LEGISLATION—Mrs. Charles R. Henry, 4 Armistead Road, Little Rock.
 MARTHA HARDING GANN MEMORIAL LOAN FUND—Mrs. Curtis W. Jones, Sr., Benton.
 MEMBERS-AT-LARGE—Mrs. Mahlon D. Prickett, 4316 S. Lookout, Little Rock.
 MEMBERSHIP—Mrs. Gordon P. Oates, 5001 Country Club, Little Rock.
 MEMORIAL AND CHAPLAIN—Mrs. C. E. Kitchens, DeQueen.
 NURSE RECRUITMENT—Mrs. W. G. Cooper, Jr., 621 N. Pine, Little Rock.
 ORGANIZATION—Mrs. Joe Verser, Harrisburg.
 PROGRAM—Mrs. T. Duel Brown, 2120 Schiller, Little Rock.
 PUBLICITY—Mrs. W. L. Shippey, 612 West 24th, Fort Smith.
 PUBLIC RELATIONS—Mrs. Max F. McAlister, 18 East Dickson, Fayetteville.
 PHYSICAL HEALTH EXAMINATIONS—Mrs. George H. Wright, 422 East Second, Hope.
 RADIO—Mrs. Garland Murphy, Jr., 626 East 6th, El Dorado.
 RESEARCH AND ROMANCE OF MEDICINE—Mrs. C. W. Parkerson, 110 Levin, Hot Springs.
 RURAL HEALTH—Mrs. Warren S. Riley, 806 N. Madison, El Dorado.
 TODAY'S HEALTH—Mrs. R. C. Dickinson, Horatio.

COUNTY PRESIDENTS

ARKANSAS—Mrs. S. A. Drennan, Stuttgart.
 BOONE—Mrs. Ulys Jackson, Harrison.
 BOWIE-MILLER—Mrs. T. E. Ellison, 2523 Olive, Texarkana, Texas.
 COLUMBIA—Mrs. Paul Sizemore, 410 East McNiel, Magnolia.
 CLARK—Mrs. Jack W. Kennedy, 1543 Twelfth St., Arkadelphia.
 CRAIGHEAD-POINSETT—Mrs. Grover Poole, 914 Witt, Jonesboro.
 CRITTENDEN—Mrs. W. S. Watson, Earle.
 GARLAND—Mrs. Robert Atkinson, 512 Rector, Hot Springs.
 GREENE-CLAY—Mrs. Clark M. Baker, 427 West Emerson, Paragould.
 HEMPSTEAD—Mrs. Jim McKenzie, 1023 East 3rd, Hope.
 HOT SPRING—Mrs. C. R. Ellis, South Main, Malvern.

HOWARD-PIKE—Mrs. Ed Hopkins, Jr., 120 West Sybert, Nashville.
 INDEPENDENCE—Mrs. Calvin Churchill, 204 East 6th, Batesville.
 JACKSON—Mrs. J. A. Ashley, 415 Main, Newport.
 JEFFERSON—Mrs. J. Clyde Hart, Jr., 240 Linden Heights, Pine Bluff.
 JOHNSON—Mrs. G. R. Siegel, Poplar St., Clarksville.
 NINTH COUNCILOR—Mrs. H. V. Kirby, Harrison.
 MONROE—Mrs. E. D. McKnight, Brinkley.
 OUACHITA—Mrs. Lawrence Drewry, Cash Rd., Camden.
 POPE-YELL—Mrs. Max Mobley, Russellville.
 SEVIER—Mrs. Roger Dickinson, DeQueen.
 PULASKI—Mrs. Gordon P. Oates, 5001 Country Club Blvd., Little Rock.
 SEBASTIAN—Mrs. Everett Moulton, Jr., 2305 S. Greenwood, Fort Smith.
 SOUTHEAST ARKANSAS—Mrs. M. C. Crandell, Wilmot.
 UNION—Mrs. Gardner H. Landers, 1201 West Seventh, El Dorado.
 WASHINGTON—Mrs. Max F. McAlister, 18 East Dickson, Fayetteville.

DELEGATES TO THE LEGISLATIVE LEAGUE

Mrs. Charles R. Henry, Little Rock
 Mrs. H. M. Armstrong, Little Rock
 Alternates:
 Mrs. Mason G. Lawson, Little Rock
 Mrs. J. A. Buchman, Little Rock

COUNCIL WOMAN TO THE AUXILIARY TO THE SOUTHERN MEDICAL ASSOCIATION

Mrs. Gordon P. Oates, Little Rock
 Mrs. James G. Martindale, Hope, Vice-Councilor

LOCAL COMMITTEE CHAIRMEN ON CONVENTION ARRANGEMENTS

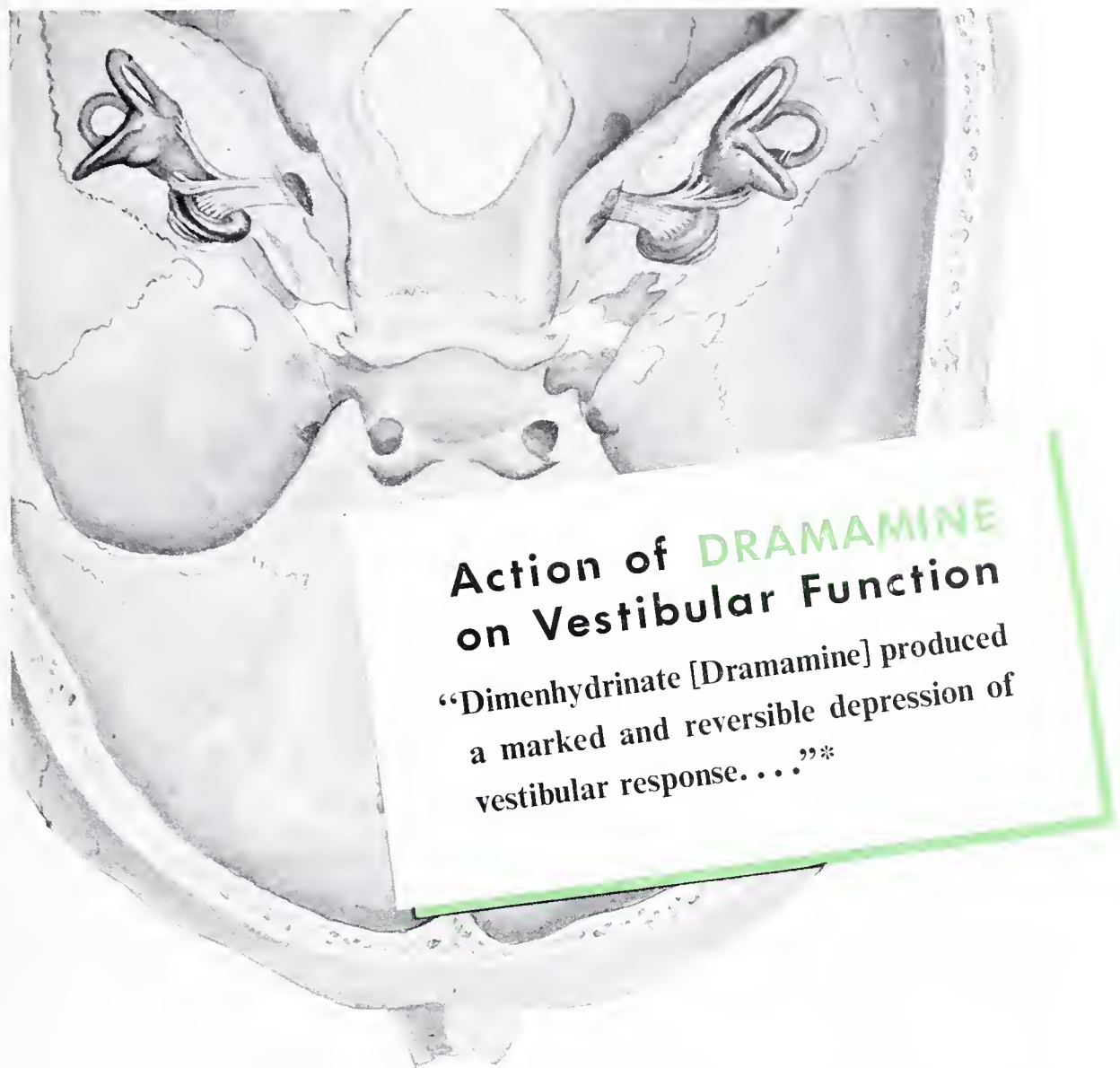
GENERAL CHAIRMAN—Mrs. Ben D. Means.
 ENTERTAINMENT—Mrs. T. J. Raney.
 REGISTRATION AND CREDENTIALS—Mrs. Paul M. Fulmer.
 TICKETS—Mrs. E. L. Wilbur.
 COURTESY—Mrs. T. D. Brown.
 PUBLICITY—Mrs. Hoyte Choate.
 MENU—Mrs. Ewell Thompson.
 FLOWERS—Mrs. William Snodgrass.
 PAST PRESIDENT'S BREAKFAST—Mrs. Curtis Jones, Sr.
 GENERAL INFORMATION—Mrs. Ray Fulmer.
 FINANCE—Mrs. N. T. Hollis.
 EXHIBITS—Mrs. Deane Wallace.
 FAVORS—Mrs. J. Leo Aday.

PROGRAM

Monday, April 21, 1952

Continental Room, Hotel Marion

9:00 A. M.—Registration, Ante-room to Continental Room.
 11:00 A. M.—Pre-Convention Board Meeting.
 12:00 Noon—LUNCHEON for General Membership.
 Presiding—Mrs. James G. Martindale, President.
 Invocation—Mrs. C. E. Kitchens, Chaplain.
 Greetings—Dr. R. C. Dickinson, Chairman Advisory Council.
 Address—Mrs. V. Eugene Holcomb, Charleston, W. Va., President of the Woman's Auxiliary to the Southern Medical Association.



In a study of the action of Dramamine on vestibular function, Gutner and his associates found that Dramamine “significantly delayed the onset of nystagmus, shortened the duration of nystagmus and increased the milli-ampere necessary to effect tilting.”

The great effectiveness of Dramamine in motion sickness, they state, “. . . is probably related primarily to its ability to depress vestibular function. . . .”

DRAMAMINE®

BRAND OF DIMENHYDRINATE

—for prevention and treatment of motion sickness—

Now available in these dosage forms: { Tablets — 50 mg.
Liquid — 12 mg. per 4 cc.
Average dose — 50 mg.



*Gutner, L. B.; Gould, W. J., and Batterman, R. D.: Action of Dimenhydrinate (Dramamine) and Other Drugs on Vestibular Function, Arch. Otolaryng. 53:308 (March) 1951.

RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

GENERAL SESSION

2:00 P. M.—Opening of Session, Continental Room.

Presiding—Mrs. Gordon P. Oates, President
Woman's Auxiliary to the Pulaski County
Medical Society.

Invocation—Mrs. J. B. Crawford, Little Rock.
Address of Welcome—Mrs. Hoyte Choate,
Little Rock

Introduction of the State President—Mrs.
James G. Martindale, Hope.

Response to the Address of Welcome—Mrs.
Jack W. Kennedy, Arkadelphia.

Introduction of Special Guests—

Mrs. Harold F. Wahlquist, President of the
Woman's Auxiliary to the American
Medical Association, Minneapolis, Minn.

Mrs. Eugene V. Holcomb, President of
the Woman's Auxiliary to the Southern
Medical Association, Charleston, W. Va.

Mrs. Mason G. Lawson, 2nd Vice-Presi-
dent to the Woman's Auxiliary to the
American Medical Association, Little
Rock.

Mrs. Arthur A. Herold, Director of the
Woman's Auxiliary to the American
Medical Association, Shreveport, La.

Report of the Officers.

Report of the State Committee Chairmen.

Report of the Eighth Annual Conference of the Woman's
Auxiliary to the American Medical Association—Mrs.
Mason G. Lawson, Little Rock.

Report of the Convention of the Woman's Auxiliary to the
American Medical Association—Mrs. W. S. Riley, El Do-
rado.

Report of the Meeting of the Woman's Auxiliary to the
Southern Medical Association—Mrs. Gordon P. Oates,
Little Rock.

Announcement of Special Committees—Mrs. Ben D. Means,
Convention Chairman, Little Rock.

Report of the Registration and Credentials Committee—
Mrs. Paul M. Fulmer, Little Rock.

Report of the Entertainment Committee—Mrs. T. J. Raney,
Little Rock.

Timekeeper—Mrs. Don Dykstra, Little Rock.

Monday Evening, April 21, 1952**Hotel Marion Ball Room**

9:00 P. M.—Open House and Dance, Hosts, Pulaski Coun-
ty Medical Society.

11:00 P. M.—Breakfast.

Tuesday, April 22, 1952**Continental Room, Hotel Marion**

8:00 A. M.—Past President's Breakfast.

Parlor B—Chairman, Mrs. Curtis Jones, Sr.,
Benton.

9:30 A. M.—Second General Session.

Presiding—Mrs. James G. Martindale, Presi-
dent, Hope.

Invocation—Mrs. C. E. Kitchens, Chaplain,
De Queen.

Reading of the Minutes.

Address—Dr. Charles R. Henry, President of
the Arkansas Medical Society, Little Rock.

Report of Presidents of County Auxiliaries.

Election of Delegates to the Convention of
Woman's Auxiliary to the American Medi-
cal Association.

Election of Officers.

Announcements.

Timekeeper—Mrs. Robert A. Calcote.

11:30 A. M.—Memorial Service—Joint Session with the Ar-
kansas Medical Society, Ball Room.

1:00 P. M.—Luncheon—Continental Room.

Toastmistress—Mrs. Gordon P. Oates, Little
Rock.

Invocation—Mrs. T. Duel Brown, Little Rock.

Introduction of Past President's.

Introduction of State Officers.

Introduction of Wives of Officers of Arkan-
sas Medical Society.

Introduction of Poet Laureate—Mrs. George
B. Fletcher, Hot Springs.

Address—Mrs. Harold F. Wahlquist, Presi-
dent of the Woman's Auxiliary to the
American Medical Association, Minneap-
olis, Minn.

Final Report of Registration and Credentials
Committee.

Report of Resolutions Committee.

Installation of Officers 1952-53.

Mrs. Arthur A. Herold, Shreveport, La.

Presentation of the Gavel—Mrs. James G.
Martindale.

Address of Incoming President—Mrs. Gordon
P. Oates.

Tuesday Evening, April 22, 1952**Hotel Marion Ball Room**

7:00 P. M.—Banquet.

Address—Dr. John P. Cline, President of the
American Medical Association, San Fran-
cisco, Cal.

Address—Mrs. Harold F. Wahlquist, Presi-
dent of the Woman's Auxiliary to the
American Medical Association, Minneap-
olis, Minn.

Dance.

Wednesday, April 23, 1952**Continental Room, Hotel Marion**

9:30 A. M.—School of Instruction and Post Convention
Board Conference for State Officers, Com-
mittee Chairmen, District Councilwomen,
County Presidents, Councilors.

Presiding—Mrs. Gordon P. Oates, Little Rock.

BOOK REVIEW**Penicillin Decade, 1941-1951, Sensitizations and Toxicities.**

By Lawrence Weld Smith, M. D. and Ann Dolan Walker,
R. N. 99 pages, Arundel Press, Inc., Washington, D. C.
\$2.50.

The book constitutes a sobering compilation of the re-
actions and complications of penicillin therapy that have
accompanied the use of the early impure forms and of the
current crystalline and modified forms. The material is
comprehensive but is not unduly tiring to the reader. A
few hours suffice to read this book from cover to cover and
every reader will profit by his expenditure of time.

From the standpoint of the physician, the prime message
in this very informative book is contained in the observa-
tions of R. L. Gilman, whom the authors quote as follows:
"In penicillin we do not have the sovereign remedy; all
things will not yield to it; it has failed to substitute for the
thought and drudgery necessary to evaluate the patient's
complaints."

THE *Journal* OF THE *Arkansas* *Medical Society*

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W. R. BROOKSHER, M. D., Editor
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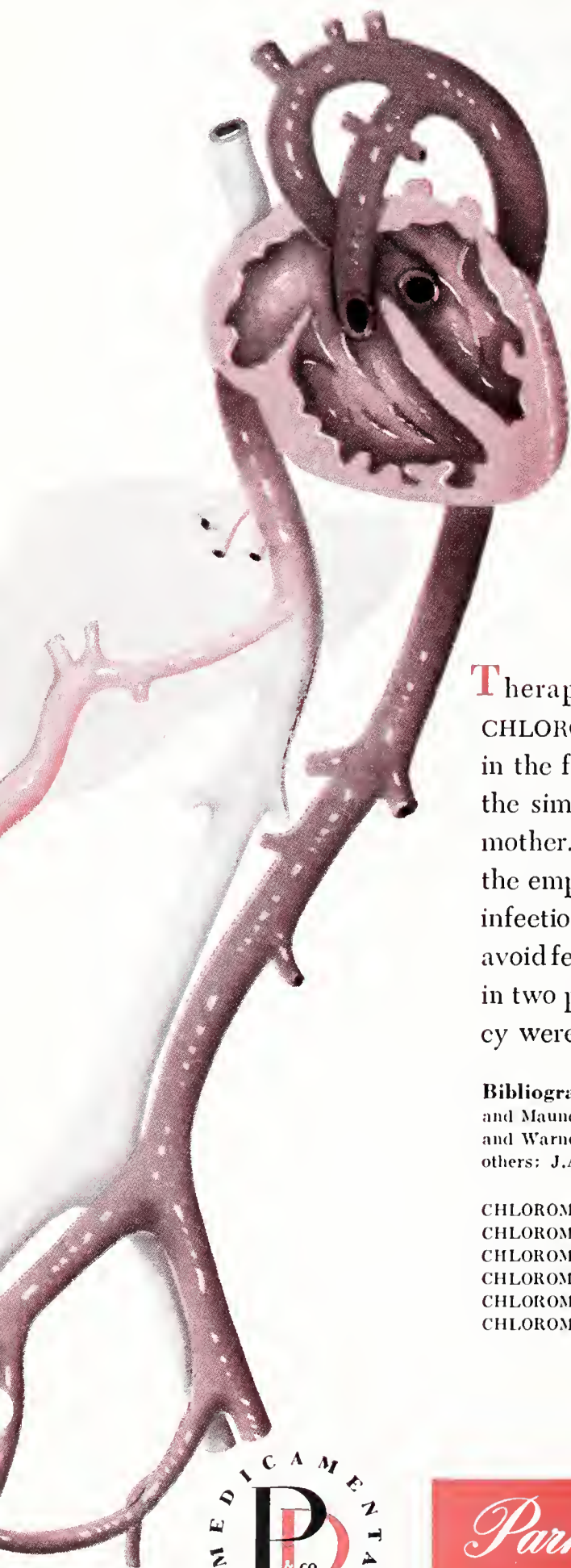
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Bibliography: (1) Stevenson, C. S.; Glazko, A. J.; Gillespie, E. C., and Maunder, J. B.: *J.A.M.A.* 146:1190 (July 28) 1951. (2) Scott, W. C., and Warner, R. F.: *J.A.M.A.* 142:1331 (April 29) 1950. (3) Ross, S., and others: *J.A.M.A.* 142:1331 (April 29) 1950.

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No. 11

A MODERN DIAGNOSTIC ROUTINE FOR CANCER OF LUNG*

J. K. DONALDSON, M. D.

Little Rock

Introduction

There is considerable evidence indicating that cancer of the lung is the **most** frequent cancer in the male. Unquestionably, it is no less than the second most frequent. Its incidence in the male is about 8 to 1 for the female.

Generally speaking, far less than one out of five cases of cancer of lung are being cured at present; and this is because we are not making the diagnosis sufficiently early.

Reasons We Are Often Failing to Make Early Diagnosis

Many physicians are failing to make diagnosis of cancer of lung sufficiently early principally for two reasons:

1. They do not appreciate fully that cancer of lung is the greatest of all masqueraders regarding various disorders of the chest.

For example, cases of cancer are too often diagnosed as tuberculosis, bronchitis, bronchiectasis, pneumonia, until the cancer becomes incurable.

2. They do not effect a **complete** diagnostic routine, and follow it through promptly and to a finish, when necessary, in suspicious cases.

For example, a physician will often refer a patient to some particular specialist for only one specific examination, as for a roentgenogram or for bronchoscopy. Then if findings are "negative" for cancer the case is often "watched" awhile, without a proper and complete diagnostic routine being completed while the patient is still potentially curable.

There are understandable reasons why many physicians have not effected a complete diagnostic investigation in many cases of early cancer of lung:

a. They have been confused regarding the **proportionate values** of diagnostic procedures for cancer of lung.

b. They have been at a disadvantage concerning the **timing** element in usage of diagnostic procedures.

We will discuss the proportionate values of diagnostic procedures later. Suffice to say here that none of the diagnostic procedures except **exploratory thoracotomy** have a higher diagnostic efficiency than about 85 per cent under most favorable circumstances; and most of them have no more than a 50 per cent efficiency in diagnosis of early cancer.

As to the **timing** element in usage of diagnostic procedures, for example: You may send a patient with or without a suspicious roentgenographic shadow for bronchoscopic examination. Examination is reported as negative. Let us assume that along with bronchoscopy very careful lavage of bronchi is effected; and that Papanicolaou smears are made from these washings and studied; and that findings are still negative. Then you may be confronted most seriously with the element of proper "timing." You may find yourself in a dilemma in the particular case as to whether to recommend "watchful waiting," with follow-up studies at a later date; or whether to recommend prompt diagnostic exploratory thoracotomy. And in considering exploratory thoracotomy, you have had to balance its expense, dangers and discomforts against the chances of cancer being present despite the inability to find it by less efficient methods.

I hope that I may have contributed one element which may enable others to become less confused regarding the "timing" element. This small contribution, if it is truly a contribution, has certainly made evaluation of the "timing" element easier for me in many cases.

The "contribution" is simply that of performing exploratory thoracotomy under local anesthesia by a very simple method.

The procedure makes exploratory thoracotomy far less forbidding to the patients than is the usual exploratory thoracotomy under general

* Read before Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

anesthesia; and it is definitely less risky. It places the most accurate of our diagnostic methods in the category of relatively simple "tests." This point will be discussed later.

Proportionate Value of Diagnostic Procedures

Before considering a diagnostic "routine," we will review briefly the proportionate values of the principle procedures which may be used in diagnosis for early, generally resectable, cancer of lung. This review includes some repetition and covers points which many of you know; but it seems necessary for completeness. (Interpretation of signs and symptoms will be considered a "procedure").

1. **Signs and Symptoms:** These are notoriously non-specific in early stages. As indicated above, they are too often suggestive of many disorders of the chest, *i.e.*, the "cigarette cough," the signs and symptoms of the "flu syndrome," chronic bronchitis, pleurisy, tuberculosis, bronchiectasis, pneumonia, and others. Their chief value should be in causing the physician to **consider** the possibility of cancer of lung along with other possibilities.

Cough is the most frequent early symptom, but it probably does not occur with over a 50 per cent frequency in the early case.

Pain, probably from pleural involvement, accompanying pneumonitis secondary to the cancer is probably the second most reliable symptom. Heavy sputum is very likely to be absent in the early cancer, though some frothy sputum may occur. Hemoptysis is not of high incidence in the early case.

We will not discuss additional signs and symptoms here.

2. **Diagnostic Value of Roentgenograms:** In brief, the roentgenogram has its greatest value in that it will often reveal that some type of trouble is present even in early carcinoma, but it is not specifically diagnostic.

Roentgenologists will agree with me when I say that no one can make a roentgenologic diagnosis of cancer of lung in 100 per cent of cases, even in advanced cancer of lung; much less, in early cancer of lung, associated or not with bronchograms.

A roentgenologist is presenting on this program results of a worthwhile study which he has made regarding cancer of lung. It is interesting to note that in 2 of the 50 cases which he studied, no abnormality could be seen upon roentgenogram, though early bronchogenic carcinoma was found at operation.

Despite limitations of the X-ray in specific diagnosis however, the following two cases show the need for its more frequent usage.

Case 588-51, St. Vincent's Infirmary: This white male, aged 32 years, a dentist and son of a physician, reported to us January, 1951. He had no symptoms whatever until about the middle of November, 1950. At that time he began to notice a little discomfort in the anterior superior part of the right side of the chest. He believed this discomfort was from shooting a shotgun during hunting season.

Pain gradually increased in region mentioned, radiating posteriorly to scapular region.

At the time he reported to us, he had no symptoms except the pain. No cough, no history of expectoration of blood nor other material. His general appearance was that of perfect health.

Bronchoscopic examination with lavage of bronchi and study with Papanicolaou smears were done elsewhere by competent men and were non-revealing.

We performed exploratory thoracotomy January 23, 1951. We found a far-advanced, unresectable malignancy with implants on the diaphragm. The cancer was of alveolar type.

If this patient had had annual roentgenograms made of his chest, it is possible that the tumor might have been diagnosed while it was still resectable.

Case 3705-50, St. Vincent's Infirmary: This white female, aged 68 years, reported to us May 20, 1950. The history was elicited very carefully. Her **only** complaint was dysphagia of **only** two weeks duration.

Exploratory thoracotomy was performed May 24, 1950, and an absolutely unresectable carcinoma of lung was found.

Dysphagia was so severe that palliative gastrostomy was performed.

If this patient had had annual roentgenographic check-ups of the chest, it is probable that this "silent" carcinoma would have been diagnosed while it was still resectable.

3. **Diagnostic Value of Examination of Sputum:** Examination of sputum may be of extreme value in differentiating tuberculosis from cancer of lung. It may sometimes be of value in differentiating some fungous and other infections from cancer. But sputum is not **usually** available in **early** cancer of lung.

When sputum is available, one may determine the presence of cancer of lung in 50 to 75 per cent of cases in which it exists by **repeated** examinations of the sputum by Papanicolaou smear. However, there are numbers of pitfalls, and precautions which must be taken in examination of sputum, as discussed below.

4. **Diagnostic Value of Bronchoscopic Examination:** It is extremely unfortunate that this valuable diagnostic method too often gives many physicians a false and dangerous sense of security when no tumor is seen. **We must realize that it has been proved that an existing cancer of the lung cannot be seen through the bronchoscope in more than about 50 per cent of cases.** This is because, of course, that a high percentage of

the carcinomata are situated too far distally to be seen.

5. Diagnostic Value of Study of Washings from Bronchi by Papanicolaou Smear: This study is valuable if one understands its limitations.

Proper lavage of the bronchi during bronchoscopic examination is not particularly difficult. Yet, some bronchoscopists are not experienced with the technic. (This statement is not meant to apply to the specialist).

The washings must be collected in proper solution and sent to a good laboratory where special and careful processing and reading can be effected, as discussed below.

When one considers all factors, it is the speaker's belief that under **average specialized** circumstances, the diagnostic step has about a 50 per cent accuracy. In special environments, it may have a 75 to 85 per cent accuracy.

6. Diagnostic Value of Exploratory Thoracotomy: This is the most certain of our diagnostic methods. When properly performed, it approaches 100 per cent accuracy.

And, as stated above, exploratory thoracotomy under **local** anesthesia, properly performed, has many advantages in the speaker's opinion.

There are several reasons why the possibilities of exploration of the chest under local anesthesia have not been appreciated. These reasons will not be discussed here.

The procedure:

- a. Carries as little risk to the patient, when properly performed, as does bronchoscopy. In occasional instances, it is less risky than bronchoscopy.
- b. Causes generally less discomfort to the patient than bronchoscopy.

There is ordinarily practically no danger of postoperative complications when the exploration is performed properly. This cannot be said of exploration which is carried out under general anesthesia with the patient intubated. Exploratory thoracotomy, as it is often performed with the patient on his side, under general anesthesia, with removal of rib, is a major operation within itself.

With local anesthesia utilized as described below, the patient's hospitalization is shortened. Need for special nurses is at a minimum. Usually the patient may be discharged from the hospital to the care of his family physician within 2 to 6 postoperative days, if exploration only is performed.

The principles of **technic** are as follows for the **usual** diagnostic thoracotomy regarding cancer of lung:

(1) The patient is placed in supine position, involved side rotated forward about 20 degrees (Rienhoff position). The intercostal nerves of involved side are blocked at about the region of anterior axillary line, in the second, third, and fourth interspaces, with about 4 to 5 cc of 1 per cent procaine solution without adrenalin in each interspace.

About 3 or 4 cc are also instilled parasternally in each of the spaces named above, on the involved side only.

The skin is then "whealed," and intercostal tissue is infiltrated in the third intercostal space from sternum laterally for 4 to 5 inches.

(2) Incision 2 to 4 inches long is now made in the third interspace from sternum laterally; and pleural cavity is entered without fear of **mediastinal flutter**. (Time does not permit discussion of "mediastinal flutter." Suffice to say, one need have no fear of it).

(3) Often the case is so obviously unresectable, as noted immediately when incision is made into pleural cavity that operation is terminated, usually after biopsy. Often, too, one proceeds further; and, if so, 30 cc to 60 cc of 1/2 of 1 per cent procaine solution without adrenalin are poured into the pleural cavity to assist in control of cough reflex.

If one is uncertain as to diagnosis or resectability and **needs** wide exposure for one reason or another, he may enlarge the incision. He may, if necessary, resect a 1-inch segment of either second or third rib subperiosteally and subperichondrally, from adjacent to the sternum, still with local anesthesia.

With a 4- or 5-inch incision, and with a Finochietto retractor, the entire hand may be inserted into the pleural cavity and thorough palpation effected. (Pneumonectomy even, may be performed readily in most cases, through such an incision).

Biopsy may be procured in the usual case without difficulty. Occasionally, for quietness of respiration during biopsy, the anesthetist may lightly anesthetize the patient without intubating him.

If resectable carcinoma is present, the patient is intubated and placed under proper anesthesia immediately. One then proceeds at once with pneumonectomy.

If carcinoma is present and not resectable, the incision is closed. Ordinarily, if pneumonectomy is not performed, no water-seal drainage is established.

General Diagnostic Routine

Having evaluated our principle diagnostic methods as above, let us consider a routine for diagnosis of cancer, especially early cancer of lung.

As all "routines," the following, of course, will be varied somewhat at times. And, one may elect to omit one or more steps of the "routine." We often omit examination of sputum by Papanicolaou smear for reasons discussed below.

Before considering definitive diagnostic routine, it is in order to say that **prophylactically** one should at least fluoroscope the chest of his adult patients at least once a year whether thoracic symptoms are present or not. Preferably,

one should take routine P-A roentgenograms of the chest annually. Such study should be done just as one should examine the pelvis and breasts of women at similar or more frequent intervals.

I cited above two cases of advanced unresectable cancer of lung which I have seen in the past year, in which no symptoms **whatever** were present until far late in the disease. These are exemplary of cases which might possibly have been saved if they had had such routine roentgen-studied as just mentioned.

1. Consider any case of any upper respiratory disorder which is **obviously not** malignancy, as being potentially cancer of lung.

Take **roentgenograms** of any suspicious case **promptly**.

Remember the limitations of the roentgenogram; that cancer may be present, though the roentgenogram reveals no pathology.

(Remember, as said previously, the many disorders that cancer of lung can simulate, as acute primary pneumonitis, tuberculosis, primary pulmonary abscess, bronchiectasis, etc.

Remember that infection and pneumonitis secondary to carcinoma may respond temporarily to antibiotics and lead patient and physician to overlook the possibility of carcinoma).

2. **Study of Sputum:** (As stated above, sputum if **often** not available in **early** cancer of lung):

a. If you suspect that **tuberculosis** may be present, try to settle this point promptly **yourself**.

There is often a necessary delay in sending patients to sanatoria, a necessary delay as the patient is observed in the sanatorium. These delays may cost the patient with cancer his only chance for cure.

If the patients has suitable sputum, get specimens run promptly, for example, a specimen each day for three days. Then if you do not find tubercle bacilli, or if your patient does not have sputum, **go right ahead without delay** and look further for your diagnosis, even though you **think** still that tuberculosis may be present.

b. In some instances, sputum may be collected promptly for study for cancer cells by Papanicolaou smear. Someone experienced in "reading" Papanicolaou smears should study the sputum when this step is used.

Precautions must be taken regarding collections of the sputum.

Actually, it is better if the physician can make a suitable smear of the sputum and fix this smear himself, then forward the slides to the laboratory.

Such fixation is carried out just as the technique for fixing a Papanicolaou smear of the cervix.

If sputum is to be collected and forwarded, the sputum should be collected in 70 per cent ethyl alcohol, and forwarded promptly. It should be studied **within 24, or at most 36, hours after the sputum is collected**. An early morning specimen from a deep cough is best. If the sputum can reach the laboratory within an hour perhaps after it is coughed up some pathologists say it is unnecessary to collect it in alcohol.

At least three separate specimens should be studied if one is to attach any value to a negative report.

There is a pretty high percentage of error, however, when one depends upon the sputum for diagnosis of cancer of lung, as stated above. Even though some believe 75 per cent of diagnosis may be made by the method, this of course still leaves a high percentage of error.

Ordinarily, though we **may** study one to three specimens of sputa by Papanicolaou smear in certain cases, we do not procrastinate with repeated examination of sputa in the **usual** case.

c. It is not often that diagnosis of **fungous** infection of lung can be made satisfactorily by other than the specialist.

One may, however, place sputum upon a slide and drop 5 per cent KOH on the sputum and study the latter under the microscope. One familiar with fungi may identify pathogenic fungi by this method and follow through with additional studies as cultures and inoculations, if indicated.

One may also make Gram-stains of sputum and forward these to the laboratory.

Specimens lavaged from bronchus, as discussed just below, are much more reliable in identification of pathogenic fungi than sputum.

3. **Bronchoscopy; Lavage of Bronchi; Study of Material from Bronchi by Papanicolaou Smear, by Routine Smear and by Culture:** In the truly suspicious case, the patient is usually sent to the hospital promptly. Usually upon the following morning after his admittance, we bronchoscope the patient. If a lesion is seen, it is, of course, biopsied.

If no lesion can be seen, we aspirate secretions, if they are available. These are collected before lavage is done, part in 70 per cent alcohol and part in isotonic saline solution, or in no solution.

We then usually also lavage bronchi of the involved side carefully, according to the tech-

nique of Gibbon, whether or not "secretions" have been aspirated.

We collect part of the washings in 70 per cent alcohol.

Other parts are collected in a plain, sterile container.

All material is then sent to the laboratory in the hospital **immediately** where processing is started at once. The material is examined promptly by Papanicolaou smear for cancer cells.

Smears and slides are made of the non-alcoholic material regarding tubercle bacilli and fungi, including actinomyces.

In certain cases, in fact, usually, unless cancer cells are found, cultures are made for tubercle bacilli and fungi. Where we are highly suspicious of tuberculosis, we may also use supplemental cultures of gastric washings for tubercle bacilli.

As stated previously, the above procedures, when performed properly and handled very carefully all the way through as to collection of material, the processing of it and the reading of it may give a pretty high percentage of diagnostic accuracy, possibly around 85 per cent.

4. Exploratory Thoracotomy: Despite all precautions and thoroughness, however, with the diagnostic steps mentioned above, we still have as an absolute minimum of 15 per cent or more of error. In other words, in at least 15 out of every 100 cases, we simply cannot make a diagnosis of cancer of the lung when it exists by the methods mentioned above.

It is here that clinical judgment and experience is valuable. However, since we have developed the method of the simple exploration of the chest under local anesthesia, we more often proceed at once with exploratory thoracotomy in the suspicious cases. We feel that since the exploration has been simplified to the point that practically no risk and little discomfort accompanies it, it is extremely unwise to procrastinate in truly suspicious cases. If one does procrastinate in such patients, repeating this and that procedure, rather than doing exploration, he will lose a fair percentage of patients that could have been saved.

One might ask, well, why do all the things mentioned above if you are going ahead with exploratory thoracotomy anyway. This is a legitimate question. In the occasional case, we do proceed with an exploratory thoracotomy without doing bronchoscopic examination and lavage.

This is unusual, however, and is not generally to be recommended at present.

The thoracic surgeon, if he performs his own bronchoscopy, or if he is present when someone else performs it, may obtain certain information regarding potential location of the tumor, for example, which may be of some assistance to him at the operating table as he effects his surgical attack.

Summary

I. The general practitioner should crystallize in his mind definite steps that constitute an efficient diagnostic study for cancer of lung. **He should not refer a patient for only one particular study as bronchoscopy, for example, and fail to follow through promptly in the suspicious case with other diagnostic steps if bronchoscopic examination is negative.**

II. There are four "cornerstones" to the speaker's "routine" for diagnosis of early cancer of lung.

Obviously clinical judgment must be exercised in utilization of the "cornerstones" according to principles of differential diagnosis discussed in the body of the presentation. But they (the "cornerstones") are a reliable foundation for a truly efficient diagnostic study.

Our dictum for a proper diagnostic routine for early cancer of lung is: (1) **X-ray**, (2) **bronchoscope**, (3) **lavage**, (4) **explore**.

It is understood, of course, that if one finds an existing carcinoma by bronchoscopy and biopsy alone (about 50 per cent), that lavage of bronchi is not done. Otherwise smears for tumor cells are made from the "washings"; and usually smears and cultures for tubercle bacilli and fungi are also made from the washings.

III. Exploratory thoracotomy is the only method we have at present which approaches 100 per cent efficiency in diagnosis of cancer of lung. The procedure should be used more frequently in the truly suspicious case.

The speaker believes his method of performing exploratory thoracotomy under local anesthesia places exploratory thoracotomy in the category of relatively simple, essentially non-hazardous, "tests." Thus, he hopes he may have contributed something of value to earlier diagnosis of cancer of lung, since patients are more willing to submit to the simple procedure than they are to more radical and no more efficient types of explorations.

CARCINOMA OF THE UTERINE FUNDUS

JOHN C. WEED, M. D. and W. D. CHAMBLIN, M. D.*
New Orleans

* Fellow in Obstetrics and Gynecology, Alton Ochsner Medical Foundation, New Orleans.

From the Departments of Obstetrics and Gynecology, Ochsner Clinic and Tulane University of Louisiana, School of Medicine, and Charity Hospital in New Orleans.

For continued progress in medicine it is desirable to halt temporarily in our efforts in order to take stock of the methods which we employ. Without knowing what the results of our efforts have been in the past, improvements in the future may be difficult to achieve. Consequently, some apparent benefits may actually prove to be the opposite. Because permanent improvements in the treatment of cancer require study over long periods of time, surgeons are apt to become complacent about their methods, little realizing what the salvage in terms of years may be. Although the methods and results of treatment of carcinoma of the **cervix** have been studied in New Orleans, evaluation of carcinoma of the **uterine fundus** has received little attention. This probably results from the relative infrequency of fundal carcinoma as compared with cervical cancer as well as from the fact that one surgeon rarely sees a large number of these cases. However, a sufficient number of patients with endometrial carcinoma has been seen at Charity Hospital in New Orleans and the Ochs-

ner Clinic to reflect the methods of diagnosis and treatment currently employed in this locality. Moreover, these cases present an opportunity to study this problem from an economic as well as racial standpoint. One hundred seventy cases of endometrial carcinoma from these two institutions have been reviewed.

Incidence

Table I shows the yearly distribution of cases according to color. The striking variation in the annual number of cases is significant, since the hospital census (except for the war years when it was low) has been remarkably constant.

The ratio of occurrence of carcinoma of the fundus to that of the cervix is smaller in this series than reported elsewhere. At Charity Hospital this was 1:16 and at the Ochsner Clinic 1:6. Speert (1) reported a ratio of 1:3.

Age Distribution

The distribution of cases according to age is plotted in figure 1. It will be noted that a greater number of patients falls in the sixth dec-

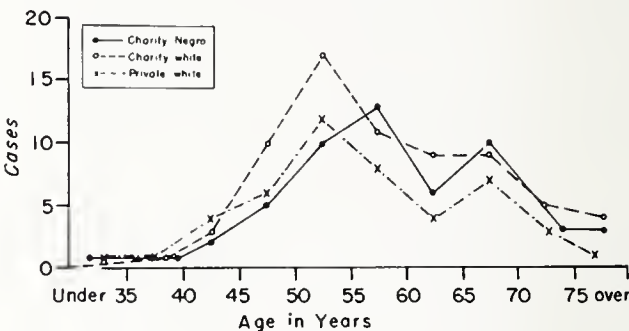


Figure 1

TABLE I

Annual Distribution According to Color of 170 Cases of Endometrial Cancer at Charity Hospital in New Orleans and the Ochsner Clinic

Year Treated	Charity White	Charity Negro	Private White
1938	3	1	
1939	1	7	
1940	9	3	
1941	6	2	
1942	10	2	3
1943	9	2	2
1944	9	5	10
1945	1	4	2
	48*	26*	17*
1946	1	0	4
1947	1	2	4
1948	3	0	9
1949	7	8	8
1950	8	18	7
	68	54	48

* Eligible for 5-year survival.

Presented before the Seventy-fifth Annual Session of the Arkansas Medical Society, Little Rock, April 24, 1951.

ade than in any other, an observation noted in other reported series (1-5). In the entire series 41.8 per cent were between 50 and 60 years of age, 26 per cent between 60 and 70 years and less than 5 per cent were under the age of 40 years. In view of the gradually increasing life expectancy, we agree with others that the incidence of endometrial carcinoma will probably rise.

The age at which the menopause occurred is shown in figure 2. It is apparent that the extended menstrual life beyond the average age of the menopause, 48 years according to Corscaden and Gusberg (6), is an important feature of the history of carcinoma of the fundus. Randall (7) has indicated that about 35 per cent of patients with fundal carcinoma menstruate beyond the fiftieth year whereas carcinoma does not develop in 92 per cent of women who go through the menopause before this time. However, Speert (1) concluded from a study of his series that women in whom endometrial car-

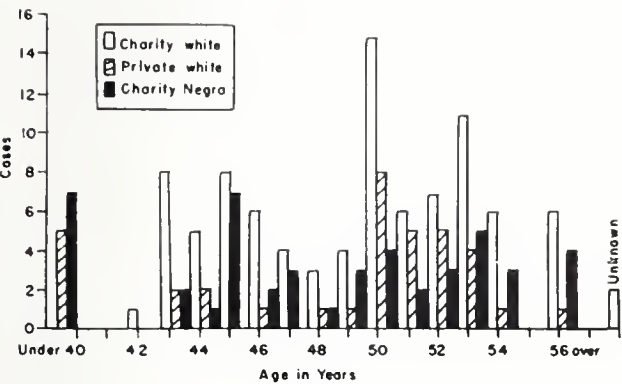


Figure 2

cinoma develops do not undergo the menopause significantly later than normal women. It is of interest that in 16 patients in the present series (nearly 10 per cent) the menopause was induced artificially by irradiation or operation.

Symptoms

The interval between the menopause and onset of symptoms is graphically illustrated in figure 3. Not included are those cases in the premenopausal or menopausal state. The security felt by passing that milestone is certainly false, since the first symptoms may develop as late as 27 years after cessation of menstruation. As can be seen in figure 3, the majority of patients first noticed symptoms from 5 to 10 years following their last menstrual period.

The initial symptom in more than 90 per cent of the patients in this series was vaginal bleeding, varying from spotting to frank hemorrhage. Spotting was the chief complaint of the majority of patients and watery leukorrhea was associated with the spotting in a minority of cases. Pain occurred late in the course of a few cases, and only rarely as a presenting symptom. As C. Jeff Miller once said, "The symptom of pain with carcinoma is the symptom of death." Only one or two patients complained of the presence of a tumor on admission.

A diagnosis of carcinoma of the endometrium was not made on routine periodic pelvic examina-

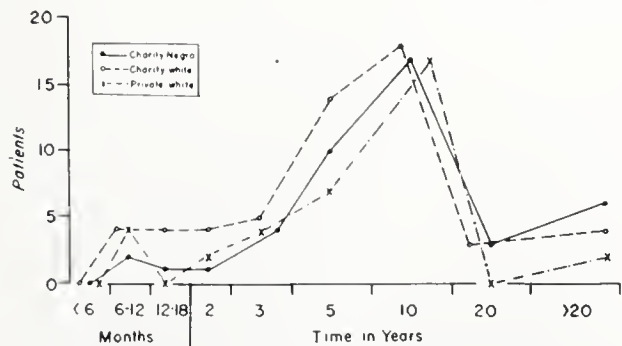


Figure 3

tion in any instance. Furthermore, the diagnosis was never made in any woman who had no symptoms. Unsuspected carcinoma of the cervix, on the other hand, has been diagnosed at least five times within the last year, although symptoms were absent.

The interval between the onset of symptoms and institution of treatment is graphically illustrated in figure 4. Of the entire series 13.5 per cent were still menstruating, but had "functional bleeding" for a year or longer. The remainder had had amenorrhea for at least six months prior to the onset of symptoms. It seems incredible with the current cancer propaganda that women can overlook vaginal bleeding, of whatever degree, for periods of months or even years. Only one fourth of the women in the series were wise enough to seek medical advice within three months of the onset of symptoms, and some neglected their symptoms as long as 10 years. Thirty-

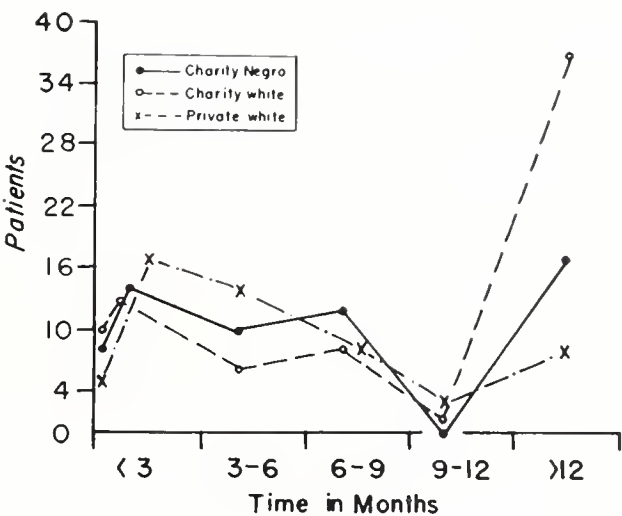


Figure 4

six per cent waited longer than one year before seeking medical aid. Howson and Montgomery (8) found that there was no delay in establishing a diagnosis of fundal carcinoma in 23.5 per cent of cases in Philadelphia and that the patients were at fault in 59.8 per cent. In this area, the patient delay is apparently much higher. It is impossible from the records to assess the responsibility of physicians in this area for the delay they may have caused. It is obvious, however, that the educational programs of the American Cancer Society are failing to reach a significant portion of the population.

Parity

The parity of the patients in this series offers little of significance. Nearly one-third were nulliparous, many of whom were unmarried. About

16 per cent, however, had had 4 or more term pregnancies with the maximum number of 13 children for one patient. These figures are similar to those reported by others (1-5). Thus, 39 per cent of Hertig and Sommers' (3) series and 41 per cent of Speert's (1) series were nulliparous. Randall and associates (4), who reported that 80 per cent of their patients were nulliparous, stated that parity had no relation to end results. Child-bearing apparently is no protection against carcinoma of the fundus, whereas nulliparity or virginity may offer some protection against carcinoma of the cervix (9).

Previous Operations

Other features of the history of these patients offer little help in the diagnosis of endometrial cancer. The significant previous surgical procedures are listed in Table II. We have been

TABLE II
Significant Previous Treatment of Patients With
Endometrial Carcinoma

Procedure	Charity		Private White
	White	Negro	
Cholecystectomy	2	0	2
Mastectomy	1	1	1
Myomectomy	0	3	1
Bilateral salpingectomy and oophorectomy	0	3	0
Treatment of benign bleeding by			
A. Radium	1	0	0
B. Radium castration less than 5 years	2	0	2
5-10 years	3	0	0
10-15 years	0	0	4
15-25 years	1	0	1
C. Roentgen-ray Castration			
less than 5 years	0	1	0
10-20 years	1	0	2
D. D & C			
1 year	1	0	2
1-3 years	3	1	1
3 years	1	1	3

interested in a possible connection between cholecystitis and estrogen metabolism, associating the former with functional uterine bleeding. We have been unable, however, to correlate endometrial cancer with the chronically diseased gallbladder. Similarly, diseases of the breast requiring mastectomy are less frequently associated with endometrial carcinoma than one might suspect if continued estrogenic activity is a factor in both diseases. It is commonly believed in our community that castration will protect against development of endometrial carcinoma, but the fact that 3 patients had had surgical castration in this series, 4 of 300 in Randall and associates' series and 3 in the series of Hertig and Som-

mers further supports the concept that extra-ovarian sources of estrogen may play an etiologic role in endometrial cancer. These cases, together with the extremely elderly, point to the fact that as long as the uterus remains it is a potential site for cancer. We have been impressed, also, with the fact that 13 patients had had application of radium and 4 had been subjected to roentgenotherapy in order to terminate menstruation. Ten per cent of our series had castration by irradiation. That radium irradiation may be a provocative factor in endometrial cancer is suggested by Corscaden and associates (10) and supported by Randall and associates (4). We have observed that the patients who received irradiation had far longer asymptomatic periods between the induced menopause and onset of symptoms (7-26 years) than the others with endometrial carcinoma. Also, these patients survived a shorter time after treatment (Table VI). If irradiation is not then a provocative factor, it must mask symptoms in this disease. Hysterectomy has supplanted irradiation for the control of menopausal hypermenorrhea to a large extent in this locality, and more gynecologists are reserving radium therapy only for those in whom serious contraindications to surgical treatment exist. Possibly this trend is exemplified by the fact that isolated curettage for postmenopausal bleeding was rarely performed in this series of patients.

Estrogen Therapy

Estrogen therapy was not given to all patients in this series, according to the medical record. However, the widespread and injudicious use of estrogens at this time in a woman's life hardly needs mention. Only 10 patients in this series received estrogens in significant amounts and at least 2 of these received continuous estrogen therapy for over a year. No implication may be drawn from this save the fact that the diagnosis was obscured. We, therefore, have no testimony to support the hypothesis of other (1,5) that prolonged and unmodified estrogen treatment favors the development of corpus carcinoma.

Physical Findings

Palpable enlargement of the uterus was noted in 60 per cent of these patients, of whom about one-third had leiomyomas (vide infra). In nearly one-third of the total number of cases, the uterine fundus was reported to be normal in size, a finding that may divert the attention of the examiner from the diagnosis.

As one might expect from the average age, degenerative changes were common. No at-

tempt was made to correlate arteriosclerotic changes, senile debility, arthritis and the like. However, the incidence of obesity and hypertension among these subjects is striking (Table III).

TABLE III
Associated Diseases

	Charity		Private	Total
	White	Negro		
Diabetes	15	5	5	25
Hypertension	52	42	23	117
Obesity	49	33	25	107

Thus, 69 per cent were hypertensive, and 60 per cent were obese. A surprising number were also diabetic, far more than one would expect in the general population. These findings add further support to the concept that endometrial carcinoma is the result of faulty metabolic changes, possibly related to estrogen metabolism.

Pathology

The pathologic lesions found in those patients treated surgically are listed in Table IV. Al-

TABLE IV
Pathology

	Private	Charity		Total
		White	Negro	
Grades III and IV				
Carcinoma	10	3	1	14
Adenocanthomas	0	3	3	6
Additional Malignancy	2	4	2	8
Fibroids	13	5	19	37
Endometriosis and adenomyosis	4	2	2	8
Extension to:				
Peritoneum	5	2	5	12
Parametrium	2	0	0	2
Ovary	3	2	1	6
Breast tumors				
Benign	0	0	2	2
Malignant	0	1	0	1

though one author (1) has stated that myomas do not have an abnormally common association with fundal carcinoma, other series (2-5) including our own indicate otherwise. Five per cent of the patients in our series had uterine myomas in various stages of degeneration and 2 leiomyosarcomas were discovered. Eleven additional malignant lesions were found in these patients; 5 ovarian, one cervical, 2 rectal, one mammary and the 2 sarcomas aforementioned. Hertig and Sommers' (3) report of 13 per cent of adenocanthomas in their series of 500 cases is somewhat higher than our incidence of 4 per cent. Endometriosis was not a common dis-

covery. The incidence of cervical polyps and endometrial hyperplasia either preceding the development of uterine carcinoma or occurring with it was considerably frequent. This concurs with the reports of Hertig and Sommers (3), Speert (1) and Randall and coworkers (4).

TABLE V
Survival Following Induced Menopause

Patient	Menopause Induced by	Interval Between Menopause and onset of symptoms (yr.)	Survival (yr.)
CW	Radium	6	3
CW	Radium	9	>5
CW	Radium	16	<1
CW	Radium	10	1
CW	Radium	26	<1
CW	Radium	13	5
PW	Radium	10	1
PW	Radium	15	<1
PW	Radium	9	<1
PW	Radium	19	<1
PW	Radium	9	<1
PW	Radium (2X)	2	5
PW	Roentgen-ray	18	<1
PW	Roentgen-ray	15	<1
CN	Roentgen-ray	10	<1 (inoperable)
CW	Roentgen-ray	1	<1 (inoperable)
PW	Radium and roentgen-ray	3	5
CN	Bilateral oophorectomy	9½	<1 (inoperable)
CN	Bilateral oophorectomy	1	3
CN	Bilateral oophorectomy	12	1

CN—Charity Negro Patient
CW—Charity White Patient
PW—Private White Patient

Treatment

As can be seen from Table VI, the treatment of fundal carcinoma in this series varied considerably. Total hysterectomy, with or without irradiation, was the commonest surgical treatment. Subtotal hysterectomy was formerly the type of hysterectomy most frequently performed at Charity Hospital; none of the cases listed in this table was performed after 1943, however. Forty-three patients in whom radium was employed received 3000 mg. hours or less, and 17 received more than 5000 mg. hours. Sixty-three received intermediate amounts. Several patients received about a total of 9000 mg. with two severe radiation reactions (one vesicovaginal fistula, one sacral cutaneous ulcer). The radium applications were single intracavitary tandems, applied more than once in a number of cases. Febrile reactions caused reapplication of radium several times. Sixty per cent of the private

TABLE VI
Treatment of Patients with Endometrial Carcinoma

Type	Dead	Alive when last seen*	Alive < 5 yr.†	Alive > 5 yr.	Total
1. Total hysterectomy	8	4	8	9	29
a. with preoperative radium	2	12	12	11	38
b. with P. O. roentgen-ray	5	3	4	5	17
c. with a and b	4	3	5	3	15
2. Subtotal					
hysterectomy	0	1	0	1	2
a. with radium	0	1	0	1	2
b. with P. O. roentgen-ray	1	2	0	3	6
c. with a and b	0	1	0	1	2
3. Exploratory laparotomy	1	3	0	0	4
a. with radium	1	1	0	1	3
b. with P. O. roentgen-ray	0	1	0	0	1
c. with a and b	1	2	3	0	6
4. Radium alone	5	12	2	2	21 (7‡)
5. Roentgen-ray alone	1	3	0	0	4
6. Radium and roentgen-ray	1	12	3	1	17 (2‡)
No treatment	3	0	0	0	3
	34	61	37	38	170

‡ Treated during last 5 years.

† Refused further treatment.

* Inadequate follow-up.

patients received no preoperative radium therapy compared with 13 per cent of the white charity patients and 36 per cent of the Negro charity patients. On the other hand, operative measures were employed in all the private patients, as compared with 35 per cent of the white charity patients and 37 per cent of the Negro charity patients. This discrepancy can be explained partially by the fact that those who refused further treatment were charity patients. Moreover, many of the extremely aged in this series fell in the charity patient group, a fact which further rendered operation less desirable. It is only within recent years that pelvic gland dissection following total abdominal hysterectomy has been employed; this was done in 7 cases of fundal carcinoma. So far no evidence of lymph node involvement has been detected. Nearly 10 per cent of the entire series were subjected only to abdominal exploration, when extension of the disease was found. Hence, the diagnosis was late in these cases. There was but one postoperative death in the series.

Results

Of the 91 patients treated five or more years ago only 41.75 per cent survived five years or longer. If, however, this group is divided into private white, white charity and Negro charity patients, the survival rates of five or more years are 58.8 per cent, 43.7 per cent and 26.5 per cent, respectively. Thus, the private white patient has over twice the survival rate of the Negro charity patient!

As can be seen in Table VI there were inadequate follow-ups in 61 patients. Analysis of this group showed that it contained no private patients. Twenty-one of the white charity patients and 17 of the Negro charity patients have not been seen or heard from since treatment. During the past five years, institution of a follow-up program at Charity Hospital has resulted in remarkable improvement in tracing patients. Thus, 16 of the 21 white charity patients unfollowed and 16 of the 17 unfollowed Negro patients were treated over five years ago. Whereas improvement in follow-up ordinarily improves survival figures, it is still apparent that carcinoma of the fundus is a formidable disease in this locality.

Comment

Survival rates that are significantly lower than those generally reported require an understanding of their cause in order to improve them. There was no relationship, strangely enough, between the survival rate and the period symptoms existed prior to treatment. This may be an erroneous deduction because of the inadequate histories obtained from charity patients. It does seem likely, however, that improvement can be obtained by earlier and thorough treatment at the time that postmenopausal bleeding appears. It is here that education programs of the American Cancer Society can be of considerable help. Such a program unfortunately fails to reach many of the illiterate, especially the Negro.

Periodic pelvic examinations, which are aiding in early detection of cervical cancer, can be utilized for detection of fundal malignancy, provided the uterine cavity is carefully probed and measured. We have recently become more conscious of bleeding following probing, and recommend curettage when that sign (Clark's) is present. The management of hypermenorrhea at the menopause likewise requires careful consideration. That only 20 per cent of patients in whom castration is performed either surgically or by irradiation survive five years when fundal carcinoma develops is an indictment of the

method. We reiterate irradiation for menopausal menorrhagia should be reserved only for those with serious contraindications to hysterectomy. There is no valid excuse for bilateral oophorectomy without hysterectomy.

The management of uterine fibroids at or near the menopause also needs clarification. Whereas small myomas will not occasion symptoms later, those the size of a three months' pregnancy or larger should be removed surgically. Undoubtedly, large and asymptomatic fibroids have masked the appearance of fundal carcinoma. It should be remembered also that malignant degeneration of these tumors, although infrequent, nevertheless does occur. We do not believe that they should be left alone, as suggested by Frank (12), or treated with radium, as advocated by the Crossens (13). Small myomas, however, may be observed at periodic examinations.

Although the use of vaginal smears has been widespread, and certainly their use is of value in detecting cervical carcinoma, experience at Charity Hospital in detection of fundal malignancy by this means has been disappointing. Undue emphasis upon a negative smear may further delay the early management of carcinoma (14).

Indiscriminate use of estrogens for women during or after the menopause is probably another reason for poor results. Certainly patients who have undergone the menopause ten or more years ago need no estrogens; yet many are prescribed for such symptoms as nervousness, irritability and hot flashes. The physician who dispenses estrogens assumes a responsibility to his patient to see that this important drug is not abused.

After the diagnosis of fundal carcinoma is made, there is little reason for not employing full treatment with radium and surgery. Experience throughout the country indicates that application of radium followed by surgical removal of the uterus will give the most satisfactory survival rates. The usual argument that elderly patients do not withstand surgical attack has been repeatedly refuted. Although the hazard may be increased somewhat, with modern surgical care, the risk is certainly not insurmountable.

Summary

One hundred seventy cases of endometrial cancer encountered at Charity Hospital in New Orleans and the Ochsner Clinic during a twelve year period ending in December, 1950, were analyzed in an effort to evaluate the methods of treating this disease employed in New Orleans. Of the 91 patients followed more than five years, 41 per cent survived this period.

However, when the five year survival rates were determined for the private and charity patients, it was found that this rate was twice as great for the private white patients as for the Negro charity patients.

Improvement in results can probably be obtained by application of radium followed by removal of the uterus soon after postmenopausal bleeding appears. This can be achieved only if patients can be made to realize the significance of vaginal bleeding and the importance of seeking treatment at once. The educational programs of the American Cancer Society have done much in this direction but they apparently still are not reaching those of the lower economic level.

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LEGENDS

- Fig. 1: Graphic representation of distribution of 170 cases of endometrial carcinoma according to age.
- Fig. 2: Graphic representation of age of menopause in 170 cases of endometrial carcinoma.
- Fig. 3: Graph showing interval between menopause and onset of symptoms in 170 cases of endometrial carcinoma.
- Fig. 4: Graph showing interval between onset of symptoms and treatment.

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			1/10	Cervical
			1/10	

DIST.	BUCKY	TIME
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0"	Yes	3/4
"	Yes	1/2
'	Yes	1/2
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TENDINITIS (BURSITIS) IN THE SHOULDER*

A. M. DAVISON, M. D.
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The creaking painful shoulder is a common problem in elderly people. It merits clarification, considering how very common is the ailment in persons past forty.

As man evolved his upright position with extreme range of shoulder motion, it is thought to have imposed a mechanical disadvantage on the tendinous support surrounding the joint capsule and added wear and tear. These tendons are thus peculiarly susceptible to premature deterioration.

The anatomy may be simplified by looking down over the outstretched glenohumeral joint from above. The humerus is retained against the glenoid of the scapula by muscles front and back. Sucken in from above is the long head of the biceps, which adds to stability of the joint. It glides inside its intertubercular sheath on shoulder motion, is stationary on elbow motion.

To identify point tenderness one may proceed around the shoulder of the patient. Directly forward on the humeral head is the lesser tuberosity with its subscapular muscle insertion. Forty-five degree anterolateral is the bicipital groove. 90 degree lateral the greater tuberosity presents the widest prominence of bone. Here is inserted the supraspinatus. Following around to the rear, the infraspinatus is posterolateral and the teres minor directly posterior and extending downward. These four short rotator tendons blend inseparably from each other forming a circular cuff of insertion into both tuberosities and the surgical neck.

The whole is covered by the deltoid muscle from which it is separated only by a cleavage plane of thin fascia. One may identify this as a bursa, but as likely will find it too flimsy and indistinct to recognize.

Lubricating tissue may be found in the shoulder over the acromion, over the tuberosity of the humerus, and under the coracoid process, shielding bony prominences from friction and irritation. These are inconstant structures and when present are quite variable in extent, so that identification of definite bursas is possible in only about 50 per cent of dissection room cadavers.

Allowing for two clavicular joints, and scapulothoracic motion that contribute to the function of the shoulder, the glenohumeral joint yet remains the most mobile of the body.

As the arm abducts upward, the first few degrees above the horizontal bring a particularly close squeeze as the greater tuberosity recedes under the acromion. The least edema or tenderness prevents clearance, or necessitates a pause and an external rotatory movement to ease by, so well described by Codman as "a catch, a jog and a wince." This is repeated coming back down.

The tendons observed through a deltoid incision in middle age often presents the appearance of degeneration. They are discolored, dull, soft and stringy like weathered cotton clothesline. Cavities may be seen in the substance of the tendon on section. As in caseous tubercle, hematoma, or atheromatous plaque, nature attempts to heal necrotic tendon tissue by exudate, fibrosis and absorption. The exudate can be milky with calcium and as it absorbs change to toothpaste and finally chalk, but at other times may not contain enough calcium to visualize. Perhaps 50 per cent of cases demonstrate negative roentgenograms.

The connective tissue flares up on occasion with edema and hyperemia in nonsuppurative inflammation. This often involves a painful exudative pressure in the cavity, appearing as a white center in a red areola in the tendon cuff. Spontaneous or surgical rupture into the overlying loose tissue instantly relieves like lancing a boil. Subsidence leaves fibrosis and thickening of local connective tissue.

Microscopic studies of autopsy material confirm the swelling, splitting and fragmentation of tendon fibers routinely in most elderly people, with inflammatory reaction and partial repair including minute multiple infiltrates of calcium salts and fibrosis in many. Such inflammation observed at surgery commonly produces the acute and disabling shoulder pain, overflowing to neck and elbow, with disability and limited motion.

We use the 19th century terminology of bursitis for this lesion although there is every reason to prefer the term tendinitis as advocated by many recent authors. Until the better term is officially sanctioned, let us understand that they are synonymous and interchangeable for, indeed, the floor of one is the roof of the other, indistinguishable at the site of pathology.

Diagnosis is usually easy because of the distinct clinical pattern. The roentgenogram helps to

* Read before Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

eliminate the possibility of arthritis or neoplasm, both uncommon.

The course, if untreated, is a self-limited bout of pain and disability. It may become very severe, especially at night, so that the anguished patient may walk the floor in tears, supporting the painful arm carefully at the side.

The first consideration in treatment is amelioration of pain by quiet, physical therapy, and medicine. The arm should not be allowed to remain too long at rest by the side, but rather should be outstretched or with hand behind head at times while in bed. The use of a heating pad or hot water bottle is excelled only by the ice bag if available. Codein and aspirin by mouth in addition suffice for mild symptoms, but morphine is often necessary. This having proved inadequate in the severe case, the final resort may be a suprascapular nerve block. This is an easy procedure at the scapular notch, and brings prompt relief in most cases. It does not add to the local edema as do Dolamin and novocain infiltrations into the lesion itself. It lasts several hours and may be repeated if the cycle of pain and spasm returns.

The barbarous practice of multiple puncture with a sizeable needle in hope of blindly rupturing a tense calcareous follicle is to be condemned. Equally inappropriate is any attempt to flush out the bursa with saline, sometimes physically impossible to achieve and unreasonable in any case considering the pathology is primary in the tendon and only secondary in the bursa. Aspiration or irrigation of the bursa could be helpful only if there is fluid in the bursa, which is rarely the case except in traumatic bursitis with hematoma. Any local injection or aspiration helps only so far as it relieves tension in inflamed parts, or aggravates the pain if it adds to local swelling and tension.

Excision of calcareous deposits may be advised in an occasional selected case in the presence of a large deposit (over 1.5 cm in longest dimension), to remove a mechanical obstacle to free abduction. Operation will not cure the underlying degeneration nor guarantee against future inflammation. Most patients should be spared the additional insult of surgery, for there is little correlation between symptoms and calcareous deposits. Smaller deposits often resorb, reappear and resorb again spontaneously.

Roentgen irradiation as an analgesic agent in the acute attack is seldom necessary and is without value in the chronic affair. Diathermy is apt to increase congestion and tension and thus to make the acute case worse instead of

better. Either massage or too active exercise may be expected to add to the painful irritation like kneading a boil, although dramatic relief ensues when such violence succeeds in rupturing a tense follicle into the freedom of the bursal plane. When pain and disability are prolonged, the full tub hot bath often brings worthwhile palliation.

Swinging pendulum exercises in a stooped position are excellent, and so is the rope and overhead pulley, or underwater exercises, all of which avoid the interference of gravity. An abduction stick is useful, employing the strength of the good arm to mobilize the painful one. These preserve or restore both strength and motion.

Special diets and vitamins, eradication of foci of infection, chemotherapy and other approaches through general bodily health are ineffective, since this is a local circumstance of unfair wear and tear under mechanical disadvantage.

It is reasonable to give up aggravating activities for several weeks at least. These are identified by each patient's own experience among sustained efforts in abduction, and include housecleaning, steering an automobile, golf, gardening, rearranging library books, amateur carpentry and similar chores. It may be necessary in extreme cases to give up an occupation such as paperhanging, painting, typing, violin, musical conducting, or traffic direction by arm signals. Climate has no essential role, although some patients feel that exposure to a cold draft may precipitate an attack and learn to avoid driving with the window down in winter.

It is probable that very few untreated patients develop adhesions and frozen shoulder, because they frequently shift in the vain hope of finding a comfortable position in the acute attack. The first impulse for the doctor is to provide an arm sling or a Velpeau bandage, but he may well resist this urge as well as the more dangerous one of complete immobilization in traction or plaster. Adhesions must be avoided. When confronted with ankylosis of the shoulder following immobilization in tendinitis, infected finger, fractured wrist, cervical disc or referred cardiac pain, the problem of the frozen shoulder may best be handled with physical therapy and exceeding patience. Adhesions will resorb and motion be restored in 6 to 18 months provided no further damage is introduced by manipulation under anaesthesia. Manipulation is capable of more harm than good and is seldom, if ever, indicated in average hands.

Strain or gross rupture of supraspinatus or deltoid tendon must be distinguished from ten-

dinitis. There is a history of a fall usually, and passive abduction is allowed, while the arm cannot be maintained outstretched sideward because of weakness. The abduction splint would be indicated early, and if this failed, then surgical repair.

With simple degenerative tendinitis, however, surgical exploration, rupture of a tense follicle in the tendon, attempts to excise fibrotic bursal tissue, etc. may be expected to yield disappointing results in the long run.

In addition to symptomatic relief and maintenance of function until the acute attack subsides, it is most helpful to explain the mechanism of tendinitis to the patient. He is often much relieved to hear that his ailment will not spread into other joints or cripple him permanently or lead to anything more than possible recurrence of what he has just been through.

Conclusions

1. The common cause of "the painful shoulder" is degeneration of tendon, on which is superimposed symptomatic inflammatory crises. Calcareous deposits are only incidental to the process of repair.

2. It is safe to prophesy that tendinitis will replace the outmoded diagnostic term bursitis in the shoulder, although both are necessarily involved together.

3. Treatment need accomplish only relief of pain, maintenance of motion, and reassurance.

Perhaps the greatest therapeutic principle left us by Hippocrates is the aphorism "as to diseases, make a habit of two things—to help, or to do no harm."

CORRECTION

In "Studies in Infertility" by Paul H. Woods, Hot Springs National Park, appearing in the February, 1952, issue, an omission occurred. On page 221, right hand column, beginning in the ninth line of the bottom paragraph, the article should read:

"The endometrium is a direct index of glandular function of the patient and the response of the uterus to that glandular function. Biopsy is done very simply and easily in the office, requiring no anesthetic, and causes only slight discomfort.

"The fourth visit of the wife is arranged during the early post-menstrual phase of the cycle, preferably two to three days following the cessation of the menses."

POLICIES AND PROCEDURES ADOPTED BY THE DEPARTMENT OF DEFENSE IN IMPLEMENTING PUBLIC LAW 779, 81st CONGRESS*

At the outbreak of the Korean incident, the only source of physicians and dentists available to the military services, other than those already on duty, was the reserve components. At that time the rolls of the active and inactive reserve components of the Army could not supply sufficient medical and dental officers, particularly in the junior grades. Only a very small number of medical and dental ASTP participants had enrolled in the Army Reserve. The Navy, on the other hand, was in a much better position because the majority of the medical and dental participants in the V-12 Program were members of the Naval Reserve. The Air Force was in a position similar to that of the Army, with the exception that it was not an independent department during World War II and, therefore, had not sponsored an educational program.

To insure an adequate number of physicians and dentists to meet military requirements, Public Law 779 (the Doctor Draft Act) was enacted. Under its provisions members of reserve components were specifically exempted from registration by the following:

"Section 4i(1) . . . No such person who is a member of a reserve component of the Armed Forces shall, as long as he remains a member thereof, be liable for registration and induction under this subsection, but nothing in this subsection shall be construed to affect the authority of the President under any other provision of law to call to active duty members and units of the Reserve Components."

The effect of relieving members of reserve components from the obligation to register exempted all participants of the Navy V-12 Program, who were members of the Navy reserve component. This comprised a large group of physicians and dentists who would have been members of the Priority I group if they had not been so exempted. Further, in the Section quoted, specific authorization to call reserve personnel to active duty is reaffirmed and this is interpreted as indicating the intent of Congress that members of reserve components be so utilized at the discretion of the President.

Extensive and earnest study was given to the most equitable and satisfactory method of bring-

* Communication from office of the Secretary of Defense, Washington, March 21, 1952.

ing physicians and dentists to active duty from the increased sources that became available after the enactment of Public Law 779. It was believed, and it still is believed, that the interests of all concerned are best served by the program which was adopted and which has been followed. It consists of assigning a priority classification, paralleling that of Selective Service, to all reserve medical and dental officers which they would have had under Selective Service had they not been exempt from registration and then calling them to active duty in accordance therewith. Thus, Priority I type reserves which includes Priority I registrants who have indicated a willingness to accept commissions are called up before Priority II's are called. It permits the Navy to utilize its reserves who were obligated to serve and it insures that the Army and the Air Force will have sufficient personnel. It also has the advantage of reducing to a minimum the necessity of actually drafting doctors by affording those who are vulnerable the opportunity of accepting commissions rather than having to face the stigma of being inducted involuntarily.

As the plan has operated, the Navy up to the present time has filled its requirements from its reserve components. The Air Force, with few exceptions, has had a sufficient number of requests for commissions and voluntary applications for extended active duty from Priority I registrants to meet its needs. Except for one month, July, 1951, the Armed Forces has been able to fill its requirements for physicians by involuntarily ordering to duty Priority I registrants who have indicated a willingness to accept commissions.

You are well aware of the advantages to the interests of the national welfare in having the local and State Advisory Committees of the Selective Service System advise the military departments on the essentiality of reserves destined for calls to duty. This arrangement has proved its merit and the departments have cooperated with it in a satisfactory manner even though the obligation to do so in the cases of reserve personnel is not prescribed under the provisions of Public Law 779.

It is true that there are some recalcitrant Priority I registrants who refuse to accept commissions and are escaping duty as long as a sufficient number to meet the requirement do volunteer. Their number, however, is relatively small. According to Selective Service statistics for January 31, 1952, of an original 10,785 Priority I living registrant physicians, 1,094 remain immediately available; and of an original 3,928 Priority

I registrant dentists, 620 remain immediately available. Since January 31, 1952, the available Priority I dentist pool has been reduced by the induction calls for 335 dentists in April, 1952, and 175 dentists in May, 1952.

When all Priority I type reserves have been called to active duty, or deferred for acceptable reasons, the Selective Service System will be requested to bring the remaining Priority I registrants into service before any Priority II type reserves are called up. It is anticipated that this will occur within the next six months; hence, the recalcitrant ones are only delaying their service until all the Priority I registrants who have accepted commissions are called up. It is a matter of opinion whether this is to their advantage. If the military emergency should cease to exist before they are inducted, they will have escaped military duty. On the other hand, if the emergency continues, they will be forced to come into service at a later date and will have to serve after their more willing contemporaries are returned to civilian life and become re-established in their practices.

It has been the desire of the Department of Defense to comply with the intent of Public Law 779. It is believed that as far as practicable this has been done to the best interests of the individuals and of the Armed Forces.



EDITORIAL

INCOMES OF PHYSICIANS

Analysis of returns in the physician's income survey reported by the United States Department of Commerce in which more than 50,000 physicians participated and in which the American Medical Association fully cooperated, shows that the city doctor is not earning the highest average income. This should be of especial interest to physicians and lay leaders who are seeking to locate physicians in the smaller cities and towns as well as to interns and residents who are giving serious thought to the matter of a location.

The average (mean) income for 1949 from medical practice of 30,000 physicians was \$11,058. Fifteen thousand doctors reported incomes of less than \$8,836, the median net income. It is significant that in the 20-year period since 1929, the average net income of all civilian physicians more than doubled, but this relative increase was practically identical with that for all earners in the general population over the same period. Drs. Dickinson and Bradley, of the American Medical Association staff, call attention to the fact that all averages refer to net incomes before taxes, and that the gain in net incomes after taxes in recent years was considerably less. The increases of earnings of physicians during the past 12 to 20 years have been due to three factors, they state: a moderate increase in fee schedules, better collections and a greater out-put per physician.

Drs. Dickinson and Bradley, commenting on the survey in *The Journal*, said that "it presently seems to us that the important implications of this study are as follows:

- "1. The rise in physicians' incomes of the past dozen or 20 years has been at about the same rate as the rise in the national income per capita. More generally, the American people have been fair to their physicians in an inflationary era from the standpoint of income; and vice versa.
- "2. Talented high school graduates will continue to choose medicine for the age-old reasons—a great interest in the natural sciences and a conviction that a medical career will provide an opportunity to serve people. The inflationary 1940's have produced only one new financial reason for choosing medicine, namely, that medicine now pays better, on the average, than law—for the incomes of lawyers have not kept pace with the inflationary trends as have physicians' incomes.

The trends for certified public accountants and consulting engineers, who reported higher incomes from physicians in earlier surveys, will doubtlessly be described in future studies.

- "3. The highest 1949 average net incomes were not received by physicians in the metropolitan cities where family living costs are high.
- "4. The differences between the average incomes of the all-salaried and the non-salaried physicians are considerable, but the value of the perquisites of the all-salaried physicians must be weighed.
- "5. The moderate increase in physicians' fees since 1935-1939, as reported by the United States Bureau of Labor Statistics, was only one of the three major factors responsible for the increase in the average incomes of physicians which has enabled physicians' incomes to keep pace with the inflationary trend of the 1940's. The other two major factors were improved collections of fees and the increased 'output per physician.'
- "6. In addition to these three specific factors, the increase in the number of physicians since the base period must be considered. If there had been the nation-wide shortage of physicians in 1949 which some writers have alleged, it is almost certain that physicians' incomes would have been, on the average, far higher and the increases in recent years far greater. This survey of physicians' incomes has revealed no general economic evidence of a national shortage of physicians."

OKLAHOMA'S GOVERNOR SPEAKS

Governor Murray in a recent speech to the medical profession of this state confirmed the belief of the general public that he is capable of doing his own thinking rather than be a mere follower regardless of the welfare of the people.

The governor's campaign slogan of "Just Plain Folks" sticks out like a sore thumb every so often in the actions and words of the state chief executive.

He pointed out in no uncertain terms to the medical profession that he is not one to join President Truman in his compulsory health insurance program because, as he put it, socialized medicine in any form is not American. The governor has long been a strong advocate of private enterprise and he made his position clear on the matter in his talk.

The governor did place upon the shoulders of the medical profession the responsibility of bringing into their camp the complete support

among the people to combat the Truman program on this score. He said that doctors are prone to speak their "piece" among themselves or a few close associates and then wonder why the masses have not seen the "light" of what could and would happen should this nation be plunged into a socialized medicine program such as advocated in the White House for the past several sessions of the congress.

Public relations, in my humble opinion, is a vital cog in the machinery of success and progress. Such has a place among the medicos and they alone are the best teachers to the public to educate the masses on the folly of compulsory health insurance as planned and to be operated by the government.

Some groups and individuals have joined the doctors in opposing the Truman health plan not because they thoroughly understand its far-reaching repercussions but because they fear that if the government gets its toe hold on the medical profession it would eventually lead to the government getting into other businesses. This theory, too, has merit.

But the significant thing to me about the governor's speech to the doctors is that he is doing his own thinking and is willing to speak his own thoughts letting the chips fall where they may. In other words, simply because Mr. Truman, too, is a Democrat and because the White House administration was elected on a Democratic ticket does not necessarily mean that all Democrats have to concur with the president for the sake of party unity in taking a stand on an important issue.

—Brooks Bicknell in Review-Courier,
Alva, Okla., Jan. 18, 1952.

APRIL IS CANCER MONTH

The month of April has been set aside by the Congress for the annual campaign of the American Cancer Society in which not only fund-raising but upon the extensive educational program which the organization carries out throughout the year. In Arkansas, the Arkansas Division of the American Cancer Society is directly sponsored by the Arkansas Medical Society and has enjoyed the full cooperation of the membership in all of its activities. Physicians have been generous not only in contributions but in giving time to conduct diagnostic cancer clinics over the state, to address lay meetings and active supervision and guidance of the aims and objectives of this volunteer organization. It is anticipated that this cordial relationship will continue with increasing

spread of the knowledge of cancer signs and symptoms among the laity and thereby in reduction of the cancer death rate by earlier diagnosis and treatment.

Several films for exhibition to both professional and lay audiences are available, among which the currently popular film: "BREAST: SELF-EXAMINATION, which may be obtained upon request from the office of the Arkansas Division, American Cancer Society, 314 Professional Building, Fort Smith." This is especially interesting to women and intensive effort is being made to present this film before as many women's groups as possible. It is desired that a physician attend each showing of the film to answer questions from the audience.

WITH THE PRESS

Despite the fact that most people look with dread on "going to the hospital" we like it. Although our sojourns in the medical and surgical institutions have been few and widely spaced, we have never yet found them anything but restful and pleasant.

* * *

In fact, we believe the profession is overlooking a bet in not encouraging more people to spend their vacations propped in the semi-reclining position of a hospital bed. Certainly no vacation spot can afford more real rest and relaxation.

* * *

Although hospitals are supposed to be quiet, we've never been in one yet that sometime during the day didn't develop all the noises of a "heavy goods" industrial plant. But you soon get accustomed to the clatter, and it actually serves as a counter-irritant to the long, silent hours of the night when you are wide-awake from too much sleeping in the daytime. Then if you feel out of sorts or want to forget the disturbances in the hall, you can ring for a "hypo" and in a few minutes everything is lovely. (Some of our readers may conclude that we have just had a "shot").

* * *

Seriously, we believe hospitals are fine and that more and more people are going to use their facilities for rest and relaxation at regular intervals instead of wearing themselves out driving around the country looking for a vacation spot to "rest."

* * *

Yes sir, we recommend that if you are really looking for rest and relaxation that you try a few days in the hospital when your vacation time comes around.

—Ralph B. Kite in De Queen Daily Citizen.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

AN OUTBREAK OF RESPIRATORY TUBERCULOSIS IN A SCHOOL

By R. T. Bevan, M.D., P. T. Bray, M.D., and J. F. Hanly, M.D.,
British Medical Journal, October 6, 1951.

Tuberculosis is frequently cited as an example of a disease which could be combated more effectively if a closer liaison existed between the hospital, general practitioner, and preventive medicine services. The localized outbreak to be described is therefore not only of clinical but also of medical administrative interest.

The first intimation of this outbreak followed an observation by the pediatrician who was investigating three cases of clinical primary respiratory tuberculosis in a hospital and had made domiciliary visits to two similarly affected children. Noting that they all came from the same area, he informed the County Medical Officer on July 15, 1950. It was quickly confirmed that all the affected children attended the same school, and the school became the center of investigations. Inquiries revealed that a member of the teaching staff had been absent from May 23 to June 26 suffering from laryngitis, but on July 17, when the school was visited by the Deputy County Medical Officer, this teacher was again absent, this time with "haemoptysis," which had occurred on the previous Friday. In due course the diagnosis of respiratory tuberculosis was confirmed. There was no common supply of milk at the homes of the affected children. The school milk supply was pasteurized.

Future action was decided at a meeting of the pediatrician, the local chest physician, and the County Medical Officers. A letter sent to all parents asked their consent to carry out Mantoux skin tests on the children at the school. All children who were absent from school were investigated. Of the 186 children in the school 176 were tested immediately. This excellent cooperation of the parents reflects their keen interest in the welfare of their children. Those found to be Mantoux-positive were X-rayed. The results of the tests and examinations are shown in Table I. Mantoux testing consisted in the intradermal injection of 0.1 ml. 1/10,000 old tuberculin followed by 0.1 ml. 1/100 in the negatives.

Table I

Results of Mantoux and X-ray Tests at Beginning of Investigation, Classified by School Grade: July, 1950

Class	Age Range	Number Tested	Mantoux Reactors		Number Showing X-ray Evidence of Tuberculosis
			Number	Per Cent of Total	
Total		176	52	30	8
Infants	5-7	48	13	27	4
Classes I and II	6-9	31	8	26	1
Class III	8-11	26	12	46	2
Class IV	9-12	33	8	24	1
Forms I and II (Secondary)	11-14	38	11	29

The schoolteacher who was now the suspected source of infection was in charge of Class III. Why, then, should the infants' class show the greatest incidence of cases with X-ray evidence of tuberculosis? The explanation was apparent when it was discovered that this teacher was in charge of the infants' class from May 8 to 12 owing to the temporary absence of the infants' class teacher.

The return to teaching duties following the initial period of sickness was unfortunate, since it was probable that further children were infected during this period. It was essential, therefore, to repeat the routine tests when the children returned to school after their summer vacation, as by that time the Mantoux test would have had time to show conversion. The local general practitioners were kept fully informed of the position, so that when children presented suspicious symptoms they were referred immediately to the local chest clinic. During the school vacation additional cases were brought to light in this manner.

One of the difficulties was to avoid undue alarm, and the parents were given an opportunity to be present at a meeting in the school. This diminished the natural anxiety and was a means of health education of the general public.

In November all those children who were Mantoux-negative in July or who had not been previously tested were asked to submit to investigation. With few exceptions the parents were prepared to cooperate. The results obtained are shown in Table 2 which emphasizes the abnormal picture of Class III—the class whose teacher had developed pulmonary tuberculosis.

In all twelve children who showed evidence of clinical tuberculosis the treatment consisted only of rest in bed, at home or in hospital, with clinical and radiological supervision. Streptomycin was not given.

All the teaching and non-teaching staff of the school immediately volunteered to undergo X-ray examinations, and, apart from the affected teacher, none showed evidence of active tuberculosis.

This local outbreak is an example of the danger that a teacher suffering from pulmonary tuberculosis can be to schoolchildren. The favorable outcome does not attract from the need of periodic compulsory X-ray examinations. Pulmonary

Table 2
Results of Mantoux and X-ray Tests at Completion
of Investigation, Classified by School Grade:
November, 1950

Class	Number Tested	Mantoux Reactors		Number Showing X-ray Evidence of Tuberculosis
		Number	Per Cent of Total	
Total	184	69	38	12
Infants	49	15	31	4
Classes I and II	33	12	36	1
Class III	28	21	75	6
Class IV	34	8	24	1
Forms I and II (Secondary)	40	13	33	---

tuberculosis, however, may be rapidly progressive in a young adult and annual examinations may not be a sufficient safeguard. Six-monthly routine examinations may be necessary to prevent outbreaks such as the one described.

The histories suggest an incubation period between the limits of 40 and 62 days.

Summary

Five cases of clinical primary respiratory tuberculosis were reported in pupils of the same school. The probable source of infection was traced to a schoolteacher. Immediate Mantoux and X-ray testing revealed three further cases. The return of the teacher concerned to school after a short

period of absence necessitated a follow-up examination of the pupils, and four further cases were brought to light. The classes predominantly affected were those with which the teacher had come into closest contact.

RANDOM THOUGHTS OF THE SECRETARY

February 28th. The personnel problem only solved at the late hour of 11:30 A. M. when Stewart Wilson fills in with us and into Harrison belatedly to carry on a diagnostic clinic which does not want for interest of attendance, supported by the Gladdens and Owens, seeing many a patient, dining at Heinies with the youngster, and homeward for long, long miles but a pleasant day throughout.

March 2nd. Throughout the afternoon the Council deliberates on matters of moment to medical organization and away to the airport with Richardson, Dean and Schaefer to find our flight cancelled, so by airport limousine to Clarksville where Peggy, who has become accustomed to this procedure, meets the group to ferry on into Fort Smith, first taking advantage of a long-sought desire, eating with Dean and Richardson, a "Western" sandwich, and commenting no further.

March 8th. Meeting with the radiologists today in informative and interesting program and this will serve notice on Willis Brown that we fulfilled our questionnaire by making this session arranged in conjunction with the postgraduate program. Homeward by the airline which today flies over Ozark, the first time we have had this view via Braniff. Tending in rapid manner to the work which has accumulated in our absence and by rail to Kansas City once again to delve into the intricacies of radiophysics.

March 9th. Today Hoecker displays erudition of the physicist and we ponder during the rainy afternoon homeward the multifold atomic story as it is now unfolded and its bare resemblance to the physics of a day gone by.

March 20th. This is Red Cross Month; last month was Heart Month and next month is Cancer Month, and we often wonder at business and professional men who object to the fund-raising activities of volunteer health agencies. Do they really wish to give up the voluntary way and let the government take over, as it shows an active disposition to do, which means, after all, just an increase in taxes above and beyond what will be given to the commendable aims of our well-established, well-managed voluntary campaigns. Let us be consistent.

March 29th. Meeting with the senior class in medicine this morning for the first of this quarter's discussions on radiology, an opportunity to refresh ourselves on the subject and to become inspired in these short sessions with Arkansas' doctors of next year and the years to come.

"Socialized medicine" under government regulation has NOT been successful anywhere on earth and in many countries it has proved a dismal, costly failure. It has brought loss of freedom to its users and has stifled and retarded medical research and progress. It is beset with "politics" governmental waste, extravagance and "red tape," and has consistently brought higher taxes on the very people it has tried to help. It holds out the false hope of "something for nothing," which, after all, is the rock on which Socialism is built.

PROCEEDINGS OF SOCIETIES

The Pulaski County Medical Society was addressed March 3rd by Willis E. Brown, on "Chronic Pelvic Pain."

E. F. Gray, Secretary.

The Sebastian County Medical Society was addressed March 11th by Mr. E. B. Sparks on "Income Tax Problems Peculiar to Physicians."

The Five-County Medical Society has elected the following officers: President, Joe Shelton, Ashdown; and vice-president, Norman Peacock, Ashdown.

The Pope-Yell County Medical Society was addressed February 14th by Martin F. Heidgen, Russellville.

W. O. Young, Secretary.

The Pulaski County Medical Society met in joint session with the medical staff of the University of Arkansas School of Medicine April 7th. The following motion pictures were exhibited: "Survival Under Atomic Attack" and "They Also Serve."

Edwin F. Gray, Secretary.

PERSONALS AND NEWS ITEMS

R. B. Robins, Camden, addressed the Niagara Falls Academy of Medicine, March 8th, on "Medicine in This Changing World."

J. B. Holder, Monticello, attended the joint meeting of the Southeastern Surgical Congress and the Atlanta Graduate Assembly, Atlanta, March 10-13th.

The following were registered at the Mid-South Postgraduate Medical Assembly, Memphis, during February: Hoyt R. Allen, Little Rock; Howard Armstrong, Little Rock; H. M. Baird, Newport; W. F. Barrier, Malvern; S. S. Beaty, England; K. E. Beaton, England; W. E. Berry, Jonesboro; G. D. Blackwood, Jonesboro; M. E. Blanton, Jonesboro; Preston Brogdon, Springdale; B. T. Brookman, Blytheville; T. D. Brown, Little Rock; W. H. Calaway, Batesville; E. J. Chaffin, Hughes; R. L. Chrestman, Jr., Helena; W. G. Cooper, Little Rock; M. L. Dalton, Brinkley; M. D. Deneke, West Memphis; S. A. Drennen, Stuttgart; W. E. Ellington, Paragould; N. B. Ellis, Wilson; L. T. Evans, Batesville; R. S. Faircloth, Walnut Ridge; Eldon Fairley, Wilson; R. G. Grant, Holly Springs; J. E. Greutter, Little Rock; R. J. Haley, Paragould; T. S. Hare, Crawfordsville; W. B. Harrell, Texarkana; J. C. Hart, Pine

Bluff; C. M. Harwell, Osceola; H. H. Holt, Nashville; J. M. Hundley, Little Rock; F. L. Husbands, Blytheville; J. F. Jackson, Newport; J. B. Jameson, Camden; G. D. Jay, West Memphis; M. C. John, Stuttgart; R. L. Johnson, Blytheville; J. K. Jones, Lepanto; Paul Ledbetter, Jonesboro; L. H. McDaniel, Tyronza; Robert L. McDonald, Eudora; L. C. McVay, Marion; M. W. Maglio, Lepanto; W. H. Moreland, Tyronza; D. L. Owens, Harrison; A. C. Parker, Clarkedale; J. T. Polk, Keiser; M. O. Peeler, Jonesboro; R. L. Purnell, Marion; L. E. Reed, Hot Springs National Park; W. T. Rainwater, Blytheville; P. R. Rodgers, Searcy; J. M. Roy, Forrest City; W. J. Sheddan, Osceola; W. F. Shepherd, Jonesboro; W. L. Sims, Hope; H. T. Smith, McGehee; R. T. Smith, Little Rock; E. J. Stroud, Paul Stroud, Jonesboro; W. R. Sullivan, Hughes; H. W. Thomas, Dermott; F. E. Utley, Blytheville; Joe Verser, Harrisburg; H. King Wade, Hot Springs National Park; H. S. Watson, Earle; R. E. Weddington, Fayetteville; R. H. Whitehead, Jr., DeWitt; E. H. Wilkes, Little Rock.

The following addressed a postgraduate pediatrics course at the University of Arkansas Medical School during February: I. Meschan, "Application of Angiocardiography"; Eugene Crawley, "Poisoning Emergencies"; Alice Gamble, "Histoplasmosis"; Edwin Rushia, "Pediatric Anesthesia"; W. K. Jordan, "Pediatric Neurological Diagnosis"; Edmond Irvin, "Developmental Evaluation"; James T. Wortham, "Diabetic Management in Pediatrics"; W. G. Lawson, "Management of Dwarfism"; and B. P. Briggs, "Current Advances in Therapy."

D. W. Goldstein, Fort Smith, attended the recent meeting of the Louisiana State Dermatological Society in New Orleans.

Dr. and Mrs. E. C. Moulton, Jr., Fort Smith, recently vacationed at Aspen, Colorado.

H. J. Hall, Clinton, spent a recent vacation in California.

H. T. Smith, McGehee, was installed as president, and Fount Richardson, Fayetteville, was elected vice-president for Arkansas at the recent meeting of the Mid-South Postgraduate Medical Assembly in Memphis.

Dr. and Mrs. M. B. Hoge, Fort Smith, spent a recent vacation in Mexico.

E. A. Mendelsohn, Fort Smith, has been elected secretary-treasurer of B'Nai B'Rith in Arkansas.

Kenneth G. Jones has moved his offices for the practice of orthopedic and traumatic surgery to 1314 Donaghey Building, Little Rock.

J. A. Henry, Russellville, and Mrs. M. G. Lawson, Little Rock, attended the Denver Rural Health Conference during March as official representatives of the Society.

Stewart M. Wilson, Rogers, and G. E. Simpson and W. R. Brooksher, Fort Smith, conducted a diagnostic cancer clinic at Harrison February 28th under the sponsorship of the Boone County Medical Society and the Arkansas Division, American Cancer Society.

R. B. Robins, Camden, the Montana Medical Association at Helena February 29th.

J. Arnold Henry, Russellville, spent a recent vacation on a Caribbean cruise to Cuba, Guatemala and Honduras.

The Arkansas Radiological Society was addressed March 7th and 8th by W. J. Rhinehart, Little Rock, "Fractures of the Lower Extremity"; E. A. Mendelsohn, Fort Smith, "Fractures of the Upper Extremity"; Kenneth G. Jones, Little Rock, "Orthopedic-Radiologic Problems"; George C. Burton, El Dorado, "Importance of Rapport Between Radiologist and General Practitioner"; D. A. Rhinehart, Little Rock, "Common Lesions in the Lungs"; Ed. C. Gray and Joseph D. Calhoun, Little Rock, "The Radiology of the Heart"; Wm. Snow, Shreveport, "Gynecologic Radiology" and "Pelvicephalometry"; J. E. Miller, Dallas, "Angiocardiography" and "Roentgen Manifestations of Intestinal Obstruction"; G. C. Reginier, Little Rock, "Radiotherapy Problems in Carcinoma of the Cervix"; Fred Hames, Pine Bluff, "Radiotherapy of Skin Cancer," and I. Meschan, Little Rock, "Recent Advances in Urologic Radiology."

Dr. Katharine Dodd, formerly associate professor of pediatrics at the University of Cincinnati College of Medicine and a member of the staff of the Children's Hospital Research Foundation, assumed her duties as professor and head of the Department of Pediatrics at the University of Arkansas School of Medicine on March 1, 1952.

Earle H. Hunt, Clarksville, and A. F. Hoge, Fort Smith, attended the New Orleans Medical Assembly and a reunion of their class at Tulane University School of Medicine during March.

W. T. Holman, Jr., has been elected a director of the Van Buren Business and Professional Association.

Diagnostic cancer clinics under the joint sponsorship of the county medical society and the Arkansas Division, American Cancer Society, were recently conducted at Berryville by W. E. Jennings, Rogers, and Jean Gladden, Harrison, and at Booneville by W. F. Adams, E. Z. Hornberger and W. R. Brooksher, Fort Smith.

OBITUARY

JOHN R. DIBRELL, Little Rock, died February 25th. A graduate of the University of Arkansas School of Medicine in 1900, he later served as professor of bacteriology in the school, was formerly chief of staff of Saint Vincent's Infirmary and a member of staff of the Baptist Hospital. He was a fellow of the American College of Physicians and of the American Medical Association and an honorary member of the Pulaski County Medical Society and of the Arkansas Medical Society. Formerly associated with his father, James Dibrell, and his brother, James Dibrell, Jr., he was later associated with O. C. Melson. He was a past president of the Arkansas State Board of Health. His wife survives him.

LYLE L. HASSELL, Conway, age 48, died March 2nd, following a prolonged illness. Born at Rosebud, he attended Hendrix College and graduated from the University of Arkansas College of Medicine in 1931. He had practiced at Blytheville and Conway and had served as physician to the Civilian Conservation Corps and with the army medical corps during World War II. He had served as director of the Faulkner County Health Unit. Surviving are his wife, two daughters and a son.

ARTHUR A. GILLUM, age 68, Belleville, died June 5, 1951. A graduate of the University of Arkansas School of Medicine in 1907, he had practiced in Yell County throughout his professional life. He was a member of the Baptist church. Surviving relatives are his wife and four sons.

WOMAN'S AUXILIARY NEWS

The highlight of the March luncheon meeting of the Sebastian County Medical Society Auxiliary, held March 3 at the Old South Restaurant, was the visit of the state president of the Arkansas Medical Society Auxiliary, Mrs. J. G. Martindale, Hope, Arkansas. Mrs. Martindale spoke to the group on the new horizons and aims of the state auxiliary. Five phases in auxiliary work emphasized by the president were: (1) nurse recruitment, (2) civil defense, (3) radio and films, (4) rural health and (5) socialized medicine. Mrs. Martindale noted that the auxiliary is sponsoring a drive to get all members to pay their poll taxes in order to vote in the coming elections. She stated also, that the national president of medical society auxiliaries will be present at the Arkansas Medical meeting April 21-23.

Mrs. Ken Thompson presided at the meeting in the absence of the president, Mrs. E. C. Moulton, Jr., co-chairman for Doctors' Day, March 30 were appointed: Mrs. W. E. Knight and Mrs. M. E. Foster. The auxiliary voted to send red carnations to each doctor on Doctors' Day.

The nominating committee for officers for the coming year were named: Mrs. E. Z. Hornberger, Mrs. Charles Chamberlain, and Mrs. A. A. Blair.

In cooperation with the state program of using radio as a means of familiarizing the public with the doctors' work, the Sebastian County Auxiliary is to sponsor a series of fifteen-minute full-time programs on radio station KFPW. There are to be twelve in the series entitled "Why Do You Worry?"

The Women's Auxiliary to the Garland County Medical Society met for a luncheon meeting at the Arlington Hotel February 12, 1952 with Mrs. James G. Martindale, state president, as guest speaker.

Our president, Mrs. Robert Atkinson, welcomed Mrs. Martindale and guests and a short business session was held during the luncheon. The members joined in repeating the pledge and the collect. The minutes were read and approved and a balance of \$228.80 was reported in the treasury.

It was announced that the auxiliary would sponsor a new series of radio programs, starting March 1 at 8:45 p. m., entitled "Stories of Famous Doctors."

Mrs. Tom Durham reported on the rural health meeting. Mrs. H. King Wade, Sr., reported that the committee that was to decide upon a project for the auxiliary suggested several proj-

ects and suggested that we buy a dozen hot water bottles for the convalescent home and that the remainder of approximately \$100 to be used to buy equipment for the Peoples Hospital. It was voted to accept the committee's suggestions.

It was voted to send \$5 to Mrs. Paul Fulmer for the Earl Chalmers Memorial Fund.

Mrs. E. K. Clardy reported that she and Mrs. R. L. Daniels held a valentine tea at the YWCA for all senior girls interested in nursing.

Mrs. John Dodson announced an all-day bridge party to be held at Belvedere February 20, the proceeds from which to go to the Heart Fund Drive.

Mrs. Atkinson appointed the following members to be on the nominating committee: Mrs. Lon Reed, chairman; Mrs. John Dodson, Mrs. Loren Bohnen, Mrs. Turner Wooten and Mrs. James Chesnutt.

Mrs. Martindale made a most interesting talk on the auxiliary program.

Mrs. John Dodson, Mrs. Charles Garratt, and Mrs. Frank Burton were in charge of the luncheon arrangements and Mrs. Frank Adams and Mrs. Tom Durham assisted in the table decorations.

Mrs. C. W. Parkerson, Secretary.

The Independence County Auxiliary was very active in working with the Red Cross Blood Bank in Batesville March 19th. The Auxiliary was instrumental in building enthusiasm and in necessary organizational work prior to March 19th and on the day the Mobile Blood Bank was in town, several members of the Auxiliary served in key positions.

The Auxiliary anticipates assisting in the Heart Campaign in the near future.

Rachel M. Taylor, Secretary
Auxiliary to Independence
County Medical Society.

Practically all companies employing as many as a half dozen persons, are turning to the various group insurance plans in which the worker and the company share the costs. Sooner or later such insurance will undoubtedly become universal, but we hope it never becomes compulsory as under the so-called "socialized medicine" of some countries and which some elements of our people are trying to foster on our country.

THE Journal OF THE Arkansas Medical Society

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W. R. BROOKSHER, M. D., Editor
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No. 12

OPHTHALMOLOGY FOR THE FAMILY DOCTOR*

JOHN W. DODSON, M. D.
Hot Springs National Park

This presentation is to be in the nature of a review of those procedures which are thought will be helpful to the family doctor who is confronted with a patient complaining of an ocular accident. There are many instances when, due to financial status of the patient or inaccessibility of an ophthalmologist, the family doctor is forced against his wishes to treat these conditions. A brief review of some principles of ocular examination and treatment might be helpful.

To begin, I should like to urge the family doctor not to overlook the medicolegal aspect of these accidents, especially those involving Workmens Compensation. A good written history is indispensable for future reference. Also, it is well to test the visual acuity if possible before any examination or treatment is given. In many cases visual acuity testing can be performed only after the pain and blepharospasm are relieved.

For external examination of the eye it is essential to have good illumination, preferably a spotlight, and magnification. A pencil flashlight and a hand magnifying glass do well. Better than the magnifying glass is a binocular loupe. A topical anesthetic agent such as Pontocaine Hcl 1/2% and a staining agent such as Sodium Fluorescein 2% often means the difference between a positive diagnosis and an uncertain guess.

Let us imagine that a patient presents himself with the complaint of foreign body sensation in the right eye for the past twelve hours. He states that he was struck in the eye by an object while sharpening a chisel at an emery wheel. He has developed marked redness of the eye, photophobia, lacrimation, and ocular pain. When the eye can be opened vision is good and there has been no secretion present.

With the patient in obvious pain the vision is

best determined after instilling two drops of Pontocaine. Vision is found to be normal. Next, external examination is done and a foreign body is seen to be imbedded in surface of the cornea. Do not stop the search with discovery of the single particle, sometimes there are several. Examine the bulbar conjunctiva thoroughly, then the lower palpebral conjunctiva, and last evert the upper lid by grasping the lashes and making downward pressure on the upper margin of the tarsal plate. This is most easily done with the patient looking downward and the examiner standing behind the head.

If no other foreign particles are found, two more drops of Pontocaine are instilled and an attempt is made to remove the one by wiping with a cotton applicator. If the particle is not loosened in this manner a rigid, sharp instrument will be needed. Unless a special eye spud is available a hypodermic needle attached to a syringe for easier handling serves the purpose very well. An attempt should be made to introduce the point of the needle into the corneal tissues just deep to the particle and the particle dislodged intact. Often it will fragment and the smaller parts must be removed separately. Do not hesitate to actually dig into the corneal tissues; they are very tough and will withstand considerable pressure before being penetrated unless the needle is especially sharp and held vertical to the surface. Continue to scrape and dig until all the particles are removed. Iron particles often leave a ring of rust in the crater. Chip this out unless you feel that you are damaging the tissues unduly. If left intact it is more easily removed in 48 to 72 hours when the surrounding healthy tissue softens.

Following removal of the foreign body this eye should be treated to prevent or cure infection in the corneal wound. It seems to me that most errors made by the occasional ocular foreign body remover occur in this after-treatment. Often the eye is left unbandaged, a combination analgesic and antiseptic ointment is prescribed to be used as needed for discomfort, or a loose bandage is applied with instructions to remove and apply the ointment. These eyes should be treated by instilling an antiseptic or antibiotic ointment with no

* Read before 75th Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

anesthetic quality and a tight dressing should be applied. Anesthetic agents have the property of drying the cornea and so interfere with rapid healing. The purpose of the dressing is secondarily to protect the eye from light and air, but primarily to maintain closure of the lids. When kept closed the cornea is much less painful and heals much more rapidly. Instruct the patient to continue wearing the bandage for 12, 24, or 48 hours, depending on the amount of damage suffered by the cornea, the deeper wounds requiring more time to heal. If the foreign body has remained in place longer than 24 hours it is well to instill atropine sulphate ointment 1% since an iritis eventually develops following introduction of a corneal foreign body.

Suppose we are next seen by a patient complaining of foreign body sensation in the eye after working in thick shrubbery in his yard. He states that he has pain, lacrimation, photophobia, redness of eye and no secretion. After visual testing the external examination reveals no visible foreign body or other pathology. Here, after instilling topical anesthetic, a drop of 2% Sodium Fluorescein is introduced into the conjunctival sac. The eye is irrigated with a copious amount of saline, boric acid solution, or tap water and we now find a well defined, sharply demarcated area of green on the corneal surface. Fluorescein stains abraded areas of the cornea very well and renders them easily visible on inspection. Conjunctival abrasions are less clearly stained but are much less painful and important. This abraded area is a potential corneal ulcer so this eye should be treated exactly like the foreign body patient; medication to prevent infection and a tight bandage for closure to aid in comfort and healing.

Pain from these two conditions is usually well controlled by salicylates or codeine by mouth.

Our third case complains of redness of the eye, lacrimation, no true pain but a sensation of roughness or sandiness of the eye, no photophobia but a production of secretion. He states that the lids are matted with dried material upon awakening in the morning. Examination reveals no foreign particles, there is no staining of the cornea with fluorescein, muco-purulent secretion is present in the conjunctival sac, and the conjunctiva is reddened in the fornices and presents a roughened surface. This patient has a condition of conjunctivitis and should be treated with local medication in ointment or solution form. This eye should never be bandaged. The secretions tend to accumulate and the growth of the infectious organisms is increased as in an incubator. If

solution is used it is unnecessary to prescribe more than two drops in the eye at each application. The eye is small and more than two drops is simply wasting medicine.

We have reviewed the presenting symptoms and signs of corneal foreign body, corneal abrasion, and conjunctivitis. In uncomplicated cases these conditions can be diagnosed with accuracy and treated with good result by any doctor who knows how to examine the eye. I see no reason why the careful family doctor should not handle them easily.

Styes and granulated lids are best treated by the newer antiseptic and antibiotic ointments and heat. They have not been discussed in detail since I believe the treatment of these is already well understood.

Other ocular conditions such as corneal ulcer, iritis, glaucoma, penetrating wounds of the globe with and without intraocular foreign body, and some contusions with intraocular hemorrhage, I feel should be referred to the ophthalmologist as quickly as possible. These conditions are a definite threat to continued good vision and even in the hands of a specialist are often quite refractory to treatment. I see no reason why the busy and long-suffering family doctor should have to assume the responsibility of protecting all-important vision when it is so threatened.

As in all branches of medicine, many advances in ophthalmic medication and surgery have been developed in recent years. Drugs such as argyrol, boric acid solution, yellow oxide of mercury, mercurochrome, and calomel powder have been largely replaced by sulfa preparations and antibiotic medications. A few of the more useful of these are penicillin, bacitracin, aureomycin sodium sulfacetimide, cortisone and the antihistaminic drugs. Conditions which required weeks to correct are sometimes cured in days with these new pharmaceuticals. Surgical procedures have been improved by changes in technique, use of sutures, new anesthetic agents, and with better pre and post operative care. I would like to speak of two surgical procedures about which many people in the medical profession seem to be confused.

One is the condition of heterotropia, eyes crossed or divergent. I have been told by the parents of many of these children that active treatment of muscular imbalance of the eye has been advised against by the family doctor because with growth the imbalance gradually corrects itself. This is true but in a very small percentage

of people. It is of definite economic and psychological importance from the standpoint of appearance and visual acuity to have this crippling defect corrected. This is best and most easily accomplished during the first five years of life and it seems shameful in view of our present knowledge to subject these people to the limitations associated with abnormal appearance and subnormal vision because of prolonged procrastination or lack of knowledge of the defect. Parents should be urged to have these children examined early since good corrective results become harder to attain as the child grows older.

Another condition is that of cataract. It seems that many doctors continue to diagnose two types of cataract, an external and an internal. By definition, a cataract is an opacity in the crystalline lens of the eye so there can be no such thing as an external cataract. Most of these latter opacities are actually a fleshy growth termed pterygium and have no connection with true cataract. Cataract surgery has become a very successful procedure with much less danger of complications since sutures and other refinements of technique have been introduced. By far the majority of otherwise healthy patients are returned to useful productive places in society by removal of the cataract.

In summary, I believe the careful family doctor is well able to handle uncomplicated cases of corneal foreign body, corneal abrasion, conjunctivitis, sty and granulated lids. With more serious conditions it is best to refer responsibility to an ophthalmologist.

CORRESPONDENCE

March 28, 1952.

Dr. Charles Henry
President, Arkansas Medical Society
Donaghey Building
Little Rock, Arkansas

Dear Doctor Henry:

I want to take this occasion to express my appreciation for, and admiration of the wonderful way in which the medical and nursing professions responded to calls for their services in the recent tornado disaster in Arkansas. This demonstration of a willingness to serve when needed is a tribute to the priceless heritage of American medicine and illustrates again the role of the physician in our society.

Yours very sincerely,

J. T. Herron, M. D.,
State Health Officer

FACTS ON TUBERCULOSIS IN ARKANSAS*

A. C. CURTIS, M. D.†

† Director, Division of Tuberculosis Control, Arkansas
State Board of Health, Little Rock, Arkansas.
Little Rock

I wish a big neon sign spelling TUBERCULOSIS sat on the desk in each of your offices and beside the bed of each of your patients, for to think of tuberculosis is to diagnose tuberculosis. Now that sounds mighty dramatic. Why get in such a turmoil about tuberculosis? It's no worse than it's ever been. As a matter of fact, it's much better than it's ever been in some respects, but suppose that the appendix had ruptured or the peptic ulcer had perforated or the fracture had compounded and became secondarily infected in 51 per cent of your cases before the diagnosis was even made. That's exactly the situation in the diagnosis of tuberculosis today. More than one-half the newly reported cases are already far advanced when the diagnosis is made and please keep in mind that the term, far advanced, means that more than the equivalent volume of one lung is involved and that cavities having a combined diameter greater than four centimeters are probably present. How would you like to have that many strikes against you in treating your other cases?

You all well remember how acutely conscious you became of the presence of polio during our greatest epidemic year in 1949, when almost one thousand cases were reported, but are you as well aware that 2,223 cases of pulmonary tuberculosis were being reported during that same year just as a matter of course. Perhaps this comparison will help you better evaluate the relative importance of tuberculosis in Arkansas. Please bear in mind that the 2,223 newly reported cases in 1949 was no epidemic, there were 1,987 newly reported cases in 1947, 2,386 in 1948, and 1,963 in 1950, so that about two thousand newly reported cases each year is the USUAL thing with tuberculosis.

Automobiles take a terrific death toll each year. Each of these deaths makes the headlines in our newspapers and everyone is much concerned about this terrible situation. What you may not know is that during that same year of 1949, tuberculosis, unheralded, was causing half again as many deaths as resulted from automobile acci-

* Read before the Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 24, 1951.

dents, 393 from traffic accidents and 613 deaths from tuberculosis. Even so, our steadily declining death rate from tuberculosis is one of the brighter aspects of the picture. In 1948, our death rate was the lowest in the history of our state, 37.5 per 100,000 population, and this decline has continued apparently through 1950 although final figures are not yet obtainable for this latter year.

Nationally, our death rate is still comparatively high. Using the latest figures available from the National Office of Vital Statistics, (1948), Arkansas is found to be in the one-fourth of the states having the highest death rates. Tennessee has a higher rate, and Louisiana and Texas have rates just a little lower. Mississippi is the third quartile while Oklahoma and Missouri have significantly lower death rates than do we. In other words, there are seven states and the District of Columbia which are worse off than we are and there are forty states in better shape.

About 37 per cent of our deaths occur among non-whites which indicates that there is a higher death rate among our negroes, but not so high as once prevailed. One distressing thing is that 51 per cent of all our tuberculosis deaths occur in the home. This means that, for a varying length of time, these terminal, probably highly infectious cases have a good chance of spreading the disease to others.

The absence of a definite incubation period, the lack of clinical symptoms early, and the relapsing nature of tuberculosis almost place this disease in a category by itself. A person infected with the tubercle bacillus may develop tuberculosis in three months or he may not develop the disease until years later. This means that a person once infected must be followed at periodic intervals until it is sure that no virulent tubercle bacilli remain in the body. At present, this can be truly ascertained only by the reversion of the once positive tuberculin test to negative. Patients often cannot understand why the doctor wants repeated chest X-rays and I believe that some time spent by the physician in an explanation of this necessity will create a much better patient-doctor relationship. Any person infected with the tubercle bacillus should begin to have annual chest X-rays at about the age of twelve, and certainly by the age of fifteen. This procedure will be necessary until we find some therapeutic measure which will totally eradicate every tubercle bacillus from the body of an infected individual.

Whether a person has been infected by the tubercle bacillus can readily be determined by an intradermal tuberculin test. Please be informed

that old tuberculin for such tests may be obtained free of charge upon request to the Arkansas Tuberculosis Association, 427 Waldon Building, Little Rock, Arkansas. Simply specify the number of tests you wish to perform and a sufficient amount of the test material, diluted and ready to use, will be sent you. This is the second strength O.T. and O.I c.c. contains O.I mg. of the antigen. I would like to caution you that this diluted reagent will reliably retain its strength for only about seven days and that five days after you receive your supply, the unused portion should be discarded. It should be refrigerated in the meantime. Use of impotent testing material has often accounted for false—negative reactions.

With many persons now reaching adult life with a negative tuberculin reaction, this test is becoming of increasing importance in the differential diagnosis of chest diseases. A positive tuberculin test in the presence of a chest lesion only admits of the possibility that the pathology is tuberculous in origin; but a negative test, properly done, pretty well rules out tuberculosis. The State Health Department does not at present advocate mass tuberculin testing of school children as a casefinding procedure, but the routine testing of infants from three months to three years of age is advised since the source case of these positive reactors may well be found in the home.

Perhaps the deadliest aspect of tuberculosis is its insidious onset and lack of symptoms early. The fact that the majority of cases, even now, are advanced and late tuberculosis when diagnosed bears startling testimony to this fact. This is just part of the picture of tuberculosis and we should all recognize the fact. If the patient must wait for the disease to be diagnosed until clinical symptoms cause him to seek medical advice, then massive lung destruction will have already taken place. Until the day when every adult is educated to the necessity of an annual physical examination, and until every doctor is educated to the fact that no physical examination is complete until a chest X-ray has been done, there will remain the necessity for some screening device to bridge the gap between the doctor and the apparently well adult. I keep stressing the adult because in Arkansas, today, tuberculosis is a disease of adult life and it is here that the infectious cases are found from which all other cases come. If we clean-up the adult population, the children would be automatically protected.

Your state has such a screening device in the form of four mobile chest X-ray units. With these four units, an average of two hundred thousand individuals are being X-rayed each year for chest

diseases. Did you know that some sixty-five different abnormalities of the chest may be revealed by a chest X-ray? So far as tuberculosis is concerned, in 1949, out of about 200,000 people X-rayed, seven hundred cases were called to the attention of the private practitioners of the state and were diagnosed and REPORTED for the first time. I have emphasized "reported" because I know that other cases have been discovered by this work, but have never been officially reported by the physicians to the local or state health departments. Please help us to keep you properly informed about the tuberculosis situation in our state by promptly reporting to your health department all cases of tuberculosis coming under your supervision for the first time. It is only by this means that our state central register is maintained. Arkansas can be proud of the fact that it is one of the few states that can keep its physicians and people informed as to the inroads of this disease so far as morbidity is concerned.

The seven hundred cases first discovered by these mass chest X-ray surveys were in a much happier circumstance when the family physician made the final diagnosis after the case had thus been brought to him. Forty per cent of these cases were minimal in extent, and only 26 per cent were far advanced. Among those unfortunates who waited until symptoms brought them to the doctor for diagnosis, only 12 per cent were minimal and 51 per cent were already far advanced. Tuberculosis can be cured beyond any question of a doubt if discovered early, but you can see what a detrimental effect the lack of early symptoms can have on the treatment of this disease.

Our state is fortunate in having two such fine sanatoria which are so ably managed. Our bed capacity is not sufficient, but the superintendents of these institutions are making wonderful use of available facilities and are restoring thousands to health. A most critical time in the recovery from tuberculosis, however, is the "trial" period when the patient leaves the sanatorium and returns to his place in society. Through the medium of our central tuberculosis case register and the staffs of the local health departments, we are attempting to keep all newly arrested cases under your medical supervision for a five year period as it is during this time that the patient either makes the grade or breaks down again and has to start all over. Such cases, together with the frankly active cases, number almost ten thousand and would make a city larger than Conway or Russellville.

A sour note in the whole picture is that we have no place to which recalcitrant patients may be

committed for treatment. These people leave the sanatoria against medical advice or disregard your instructions for protecting others and willfully wander about the streets infecting those with whom they come in contact. Your support in the provision of a hospital for the enforced isolation and treatment of such cases is needed most urgently.

We have made no plans for the widespread use of B. C. G. but consideration as to its applicability in the mental and penal institutions is being given.

In summary, there has been no apparent decline in morbidity as yet but the declining death rate makes us feel that the disease is on the wane. Tuberculosis still remains one of our most pressing public health problems. By your increased awareness of this problem and close cooperation of all those interested in its control, I feel sure that some of us will live to see it become a medical curiosity in our state.

SOUTHERN PEDIATRIC SEMINAR

The 1952 session of the Southern Pediatric Seminar will be held in Saluda, N. C., from July 14 through July 26. This is the thirty-first annual session of this institution which has become one of the outstanding postgraduate courses in pediatrics in the country. Following the plan which was put into effect last year, there will be an additional week (July 28 through August 2) devoted to the study of Obstetrical and Gynecological problems.

The Seminar was established and is maintained for the benefit of the general practitioner. Outstanding teachers and clinicians from the various southern states come at their own expense to give lectures, clinics, clinical-pathological conferences and demonstrations. The meetings are of an informal nature and there is ample time to present special subjects and questions for discussion. General practitioners from Virginia to Florida to Arkansas who have attended the Seminar can attest to its value.

Held at Saluda, which is in the mountains of North Carolina, many of the physicians bring their wives and families with them and make the occasion a joint period of study and vacation. Such a plan is encouraged by the leaders of the Seminar and every effort will be made to secure accommodations for those who might desire to do this.

The course given at the Seminar is fully accredited for postgraduate requirements in the Academy of General Practice.

Those who are desirous of further information should write to Dr. D. L. Smith, Registrar, 187 Oakland Avenue, Spartanburg, S. C.



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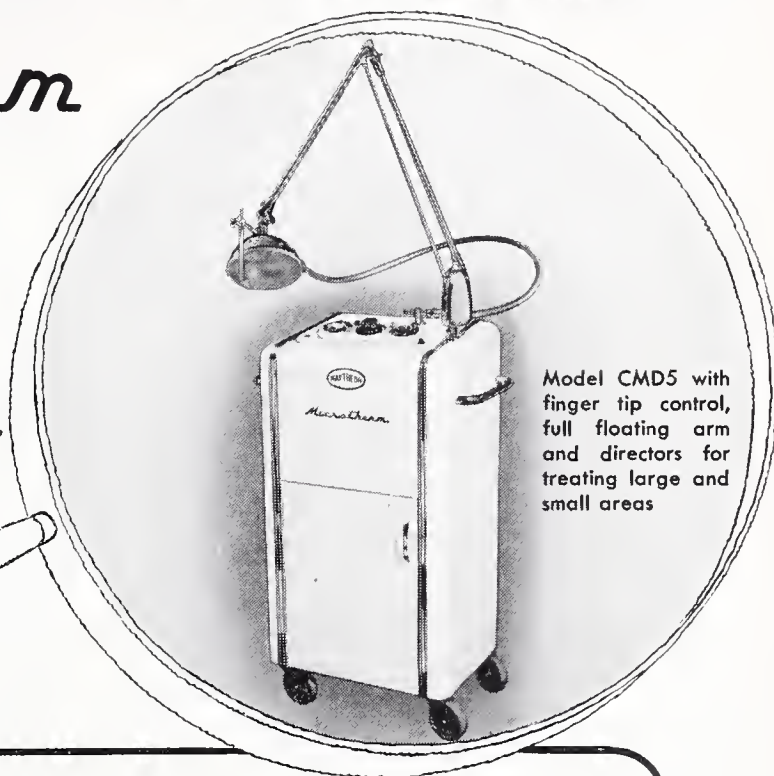
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DIFFERENTIAL DIAGNOSIS AND TREATMENT OF THE COLLAGEN DISEASES*

COLONEL CHARLES T. YOUNG
Medical Corps, U. S. Army

This group of diseases, commonly referred to as the collagen diseases, having certain tissue pathology changes in common, have been the basis for much discussion and, at times, disagreement amongst pathologists and clinicians.

Cause of the diseases of the so-collagen group is unknown. Various theories that have been considered are briefly as follows: The majority of the collagen diseases are thought by some investigators to be on an allergy basis. The allergy basis is particularly thought to apply to Lupus Erythematosus and Periarthritis Nodosa, and has recognition in rheumatic fever also as oetiology, largely because of the type of lesion. The substance to which rheumatic fever patients are thought to be highly reactive is a toxin from the Group A hemolytic streptococci. In any event, the initiatory role of the above streptococci seems proven in rheumatic fever. The fact that, in rheumatic fever prevention, it is necessary to avoid Group A hemolytic streptococcal infection in order to avoid reactivation of rheumatic fever is so well established that the above is more significant.

Rich showed the fibrinoid change in connective tissue as a feature of local anaphylaxis as seen in the Arthus phenomenon. He pointed out, in 1942, the increase in number of cases of periarthritis nodosa noted subsequent to the use of sulfa drugs in treatment of infections at Johns Hopkins Hospital. This was also noted following use of serums and iodides in infections. It is of interest to note also that, experimentally in animals, fibrinoid degenerative change in collagen tissue has been produced as an allergic tissue response.

Klemperer has warned against using the term "collagen diseases" expressing the view that although certain common changes are observed in all of these conditions, there is no evidence they are oetiological or functionally the same.

The acute bacterial infection basis and the relationship of serum sickness are being studied.

Klemperer has expressed the feeling that the disturbance of nucleic acid metabolism of the mesenchymal cells may be a factor in the cause of lupus erythematosus. Collagen alteration in the base of chronic peptic ulcers or adjacent to areas of acute pancreatic necrosis is very similar to

fibrinoid degenerative changes in the collagen diseases. Also, the collagen changes noted in old age and after trauma are quite similar.

It is not the intention of this paper to deal with the pathology of the collagen diseases, but it does appear well to mention some of the cardinal changes briefly:

As to the basic pathology in the collagen diseases, alteration of the extracellular portion of the connective tissues is prominent and systemic in location. Actually, several diseases belonging to this group have common sites of anatomic involvement, but have some dissimilarities also that are significant and diagnostic. The gross changes are in many instances so inconsequential as to make diagnosis by this means impossible. The microscopic tissue changes are the ones that are usually significant.

Swelling of the ground substance with increased visibility associated with straightening and thickening of the collagenous fibres, increased friability and varying degree of eosinophilia is noted. The fibrinoid degeneration frequently going on to necrosis in some of these diseases characterizes the acute phase. There is oedema and swelling of the ground substance around the area of fibrinoid degeneration. Basically the pathology has been described as being divided into destructive, proliferative and inflammatory phases.

The variable degree of change in diseases of this group in the various tissues and viscera involved is usually diagnostic, as will be illustrated.

Thus, in rheumatoid arthritis and rheumatic fever, the involvement of the blood vessels is insignificant, as contrasted to the marked changes that develop in lupus erythematosus and periarthritis nodosa where there is initially seen subintimal fibrinoid degeneration, which rapidly becomes more extensive involving all coats of the arteries and arterioles and later necrosis develops. In the advanced stages there is seen at times even thrombus formation. In lupus erythematosus there is widespread collagen damage and degeneration with aforementioned vascular changes, which in particular is localized in smaller arteries, arterioles and capillaries. Periarthritis nodosa has been described as a form of inflammatory, necrotising and obliterative panarteritis of small arteries, arterioles and occasionally veins.

The lupus erythematosus cell phenomenon described by Hargraves in 1948 and first noted predominantly in smears from the bone marrow of patients with lupus erythematosus, and later also at times in the buffy coat of the peripheral blood, is diagnostic. This cell in its most characteristic form is a polymorphonuclear leucocyte

* Read before the Seventy-fifth Annual Session, Arkansas Medical Society, Little Rock, April 23, 1952.

with a round basophilic homogenous mass in the cytoplasm. The material stains for thymonucleic acid.

The essential features as described by Hargraves and his co-workers comprise agglutination of cells, nucleolysis and phagocytosis of homogenous material by leucocytes with formation of so-called lupus erythematosus cells. Of further interest was confirmation of Haserick and his group who found that when blood plasma from such patients was added to leucocytes in vitro or to bone marrow from normal persons, the same reaction takes place. The responsible factor was found to be associated with the gamma globulin of the plasma. The above is of particular help in borderline cases.

The discoid and disseminate phases of lupus erythematosus are not far removed from each other according to Brunsting. In other words, the question has been raised as to the patient with the chronic discoid form possessing some inhibiting factor which obviates the systemic manifestations as seen in disseminated lupus erythematosus. The question, since the latter disease is preponderately seen in females, of there being a hormonal factor controlling the balance, thus affording the male some protection, or the female some catalytic accelerating factor, has been suggested but is not substantiated.

The differential diagnosis clinically of diseases of this group presents problems which may well test the ability of the ablest clinician.

Much more interest is now being shown in lupus erythematosus. Characteristically in this disease, the patient is a young woman who has an illness usually starting insidiously and who presents an erythematous rash over the face, especially over the bridge of the nose and malar eminences, and the V of the neck, which usually does not itch. The patient will have general symptoms of fatigue, weakness, arthralgia and history of sensitive mucous membranes of the mouth with occasional tendency to bleed. There is usually moderately persistent fever of 100 to 102 degrees initially which may become much higher or, there may be in the more insidious cases, intermittent bouts of fever.

Less frequently, the patient presents a history of chest and/or abdominal pain, oftentimes vague. However, when pleurisy or pericarditis develops the pathology is more readily and specifically apparent. A history of laparotomy done prior to the diagnosis being established is not infrequent. Skin lesions may not be present. Cases with far advanced joint pathology simulating rheumatoid arthritis are not infrequent. Convulsions, espe-

cially in advanced or terminal cases are not infrequent. The laboratory findings are quite helpful, namely, the neutrophilic leukopenia, elevated sedimentation rate, albumin and red blood cells in the urine, and also there may be evidence of an early microcytic anemia. There occurs later a reversal of the albumin-globulin ratio.

Diagnostically, demonstration of the lupus erythematosus phenomenon in the heparinized bone marrow or in a specimen taken from the buffy coat of the heparinized blood is confirmatory. Dr. Baehr has reported on 20 cases and has been able to demonstrate the lupus erythematosus phenomenon in all cases.

Of his 20 cases, it is interesting to note also that 8 are men and 12 women. Five of his cases are dead. Length of remissions vary from a few weeks to a few months.

Formerly thought to be a rare disease, it is diagnosed more and more frequently, especially since the lupus erythematosus phenomenon has been described by Hargraves.

Periarteritis nodosa, a form of necrotizing obliterative panarteritis oftentimes is seen in patients having infections and who have been treated with sulfonamides, iodides and serums. This condition occurs more frequently in patients having a history of bronchial asthma also.

The clinical course is characterized by a septic process with many and at times bizarre symptoms depending on the organs involved. Weakness, persistent prolonged, mild, irregular fever, muscular and joint pains, and rarely actual joint pathology simulating that in Lupus Erythematosus and Rheumatoid Arthritis. Occasional vomiting, abdominal pain and hypertension occurring in nearly half of the cases, evidence of nephritis or extensive infarction of the kidney, cerebral thrombosis or hemorrhage may occur. The lesions in the peripheral arteries may suggest neuritis because of the pain. The occurrence of small subcutaneous nodules 6 to 8 MM in diameter occur commonly; skin lesions of a polymorphous nature have been reported. The biopsy study of the subcutaneous nodule is diagnostic showing the typical pathology of the disease; namely, subintimal fibrinoid degeneration of arterioles if early, or involvement of all coats with necrosis in advanced cases. Fibroblastic proliferation with cicatrization is often seen with cellular infiltration.

The clinical course and findings can closely simulate Lupus Erythematosus. The laboratory findings are helpful, as leucocytosis with a frequently associated eosinophilia is characteristic.

Scleroderma, which likewise is a systemic disease affecting females more often than males and

occurring mostly in middle life, was formerly thought to be only a skin disorder. The previously involved collagenous tissue and small blood vessels throughout the body, may be widely involved. The collagen first swells, then proliferates and finally shrinks, becoming very dense.

The skin becomes thinned and tightly adherent to the underlying structures with flexion deformity of joints and atrophic changes in terminal phalanges. There is no sweating as sweat glands atrophy. These changes are quite diagnostic and striking.

Changes in the blood vessels, especially the arterioles, show adventitia to be thickened with round cell infiltration, the media has an increase of connective tissue and the intima is thickened, narrowed or even occludes blood vessels. Practically all viscera can become involved. The findings in the gastro-intestinal tract which may become rigid, smooth and like a wax cast, are reported.

Dermatomyositis is a rare disease. The patient gives a history of gradual onset. Fever of 100 to 102 degrees, irregular or occasionally not present for a short period of time; pain is worse on movement, especially of extremities at first, though it is often present even at rest. There is increasing weakness and easy fatigability with a gradual sense of developing tightness of the skin. At first the skin over affected muscles is edematous but later on, palpation of the skin reveals it to be thin, smooth, atrophic and adherent to subcutaneous tissues. Patient can sweat, which is in contrast to the Scleroderma patient. Dermatitis of various forms, erythematous or urticarial may occur. Sensory changes have been reported. The course is progressive and prognosis poor.

Rheumatic Fever, especially the subacute form, may at times be difficult to distinguish from early Rheumatoid Arthritis. The cardiac involvement is the paramount consideration in Rheumatic Fever and only after a protracted illness is it of any likely significance in Rheumatoid Arthritis. Of importance, is the history of upper respiratory infection several weeks before appearance of Rheumatic Fever. This may be noted occasionally in Rheumatoid Arthritis also.

Rheumatic Fever is quite common in children and young adults. Rheumatoid Arthritis is more common in the young adult. The average age of onset is thirty-five years.

Onset of Rheumatoid Arthritis may be acute but is more often insidious and more frequently involves the smaller joints of the hands and feet initially, whereas in Rheumatic Fever the joint involvement is migratory and large joints are most often implicated. In Rheumatoid Arthritis there may also be a migratory swelling and stiffness of the joints though it is usually of the small joints.

Fever in the acute Rheumatic Fever patient is usually higher, not infrequently ranging from 102 to 104 degrees, while in early Rheumatoid Arthritis there may be fever usually from 100 to 101 degrees. Epistaxis is common in Rheumatic Fever.

The typical acute joints of Rheumatoid Arthritis reveal pod-shaped swelling of small joints of hands and feet. The distal joints of the fingers and toes are not usually involved in Rheumatoid Arthritis but usually the metacarpophalangeal joints and the proximal interphalangeal joints of the hands, and the metatarsophalangeal joints of the feet show initial involvement. Most often the acute Rheumatic Fever patient has painful swollen, hot joints and presents a reddish flush, but not so typically in the sub-acute form.

The assistance of an E-K-G study with its typical findings if present are diagnostic of Rheumatic Fever early in the disease. Evidence of Endocarditis, Pericarditis or of Pleurisy also specifically assists in making the diagnosis of Rheumatic Fever, and a continuing search for evidence of same is most important.

Skin lesions in Rheumatic Fever, namely Erythema marginatum and Erythema nodosum-like lesions are typical diagnostically.

The laboratory study may be of some assistance. The leucocytosis in Rheumatic Fever is usually more marked and averages 12,000 or higher as a rule.

In well advanced Rheumatoid Arthritis, the diagnosis is much simpler and the typical findings are well known.

Table showing certain important differential findings and involvements in the collagen diseases follows:

	Jts	Ser. Memb	Heart	R-E	WBC	Periph. Musc.	Skin	Subct. Tis.	Kidney Dis.	Blood Vessels
Rh. Arthritis	++++	++	?+	+++	±±±	++	+	++	0	+
Rh. Fever	+++	++	++++	±	+++	0	++	+	0	+
Lupus Eryth.	++	++++	++	++++	---	±	++++	0	++++	++++
Scleroderma	+	0	++	+	0	±	++++	++++	0	++++
Dermatomyositis	±	0	+	+	+	++++	++++	+++	0	++
Periart. Nodosa	+	+++	+++	+++	++	++++	++	++	+++	++++

Treatment

Acute Lupus Erythematosus should be treated with large doses of cortisone at first until toxicity and the fever subside. As much as 1200 Mgm daily given in divided doses, preferably every 6 hours, has been reported as being used, but in general such large amounts are not necessary nor desirable. However, it is important to give adequate dosage ranging from 300 to 600 Mgm daily, depending on severity of symptoms, in divided doses preferably every 6 hours until fever subsides. The dose can then be dropped to 150 Mgm daily and then in a very gradual manner reduce dosage further. Dr. Baehr even suggests reducing same by only 10 Mgm daily. Its continuance, if no contra-indications or complications arise, for six weeks is desirable. When patient enters a remission cortisone can be stopped but invariably will have to be used again in a few weeks or months when the disease process becomes active again. If oral cortisone is used, a slightly larger dose is needed. Dr. Baehr thinks it is more quickly and readily absorbed from the Gastrointestinal tract than from muscle. If ACTH is used smaller doses are needed. It is important to realize that cortisone is not curative but in some non-specific manner suppresses the disease processes.

In the early stages of treatment, convulsions seem to be likely in Dr. Baehr's experience. It is necessary to watch for hypertension, pulmonary edema and congestive heart failure in particular, and also hypopotassemia, hypochloremia and water balance disturbance may appear. Carbohydrate and protein metabolism are likewise affected and must be watched. The kidney damage is irreversible and the continuing disease process gradually results in a progressive renal insufficiency and death may result. It is advisable to weigh the patient daily, give a generous daily dosage of potassium chloride grams II and IV daily, keep on low sodium diet and do an E-K-G 2 to 3 times weekly. Cushing's disease fortunately has not been found to be as frequently encountered following intensive treatment, as it was feared.

In Rheumatoid Arthritis, it is not necessary to use as large doses of cortisone initially as in acute disseminated Lupus Erythematosus. The schedule usually recommended is as follows: 300 Mgm in three divided doses given every 8 hours in first 24 hours, 200 Mgm in two divided doses on second day; 100 Mgm on third day and thereafter 100 Mgm daily until two grams are given and then 100 Mgm every other day or 50 Mgm daily until 3.5 to 4 grams course is completed.

The maintenance dosage of cortisone over protracted periods is being tried with increasing fre-

quency and the side effects formerly regarded as contra-indicating such usage have not posed the problem as before. Boland has given this drug with success in small maintenance dosage for a year. Rosenberg has used it as long as ten months and others are doing likewise.

Acute Rheumatic Fever can be most likely more effectively treated than either Lupus Erythematosus or Rheumatic Arthritis. Dosage of cortisone should be initially 300 Mgm first 24 hours in divided doses; 200 Mgm second 24 hours in divided doses, and 100 Mgm daily for six weeks thereafter. ACTH can be given in smaller amounts. If patient goes into remission continue for six weeks anyway. In the treatment of Rheumatic Fever the non-specific suppressive action of cortisone and ACTH has been gratifying. Its action can best be described as controlling the disease. It is too early yet to state that cardiac lesions will not be noted residually in those recently and now being treated. Two years more are needed to evaluate treatment.

There are two schools of thought which are: (1) If the disease is treated early enough, stigma of disease can be avoided; (2) Current methods of treatment have not modified stigma of disease.

The most likely ultimate answer will be most likely between the above attitudes. The actual initial dosage and maintenance should be increased if the disease is severe and should be given at least six weeks.

In treatment of Periarthritis Nodosa, with widespread vascular damage, including cardiac and renal, the same changes and complications described in Lupus Erythematosus must be kept in mind. Hypertension, pulmonary edema, cardiac and renal failure are all apt to occur.

As this is very often a fatal disease and as it sometimes runs a rapid downhill course, caution must be exercised. Cortisone should be used but kept at a minimal dosage needed to control the disease after the initial therapy which is the same as that described for Rheumatic Fever. Even though the patient enters a remission the kidneys glomeruli are irreversibly damaged and azotemia is not infrequent. Renal insufficiency may result in death.

Scleroderma and dermatomyositis are helped only if cortisone or ACTH is used early. It is of little value after the earlier stages of the disease are passed. Doses as described for Rheumatic Fever should be adequate but larger doses may be used if no progress is made.

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PERSONALS AND NEWS ITEMS

"Complications of Gastrointestinal Diverticula Demonstrated by X-ray," by E. A. Mendelsohn, Fort Smith, appeared in *Gastroenterology*, January, 1952.

Willis E. Brown, Little Rock, discussed "Carcinoma of Cervix" at a sectional meeting and hospital staff meeting, Hillcrest Memorial Hospital, Tulsa, April 7th.

J. M. Kolb, Clarksville, has been elected president of the Central Arkansas Shrine Club, composed of members of Scimitar Temple, A. A. O. N. M. S., who reside in Conway, Johnson, Pope and Yell counties.

J. J. Monfort, Batesville, recently conducted a diagnostic cancer clinic at Melbourne under the sponsorship of the county medical society and the Arkansas Division, American Cancer Society.

C. R. Ellis, Malvern; L. H. McDaniel, Tyrnza; Fount Richardson, Fayetteville; R. B. Robins, Camden; M. D. McClain, Little Rock, and R. F. Hyatt, Monticello, attended the Atlantic City session of the American Academy of General Practice.

Chas. R. Henry, Little Rock, was elected president of the Continental Gynecologic Society at its recent session in New Orleans.

A diagnostic cancer clinic was conducted at Jasper April 10th under sponsorship of the county medical societies and the Arkansas Division, American Cancer Society, by Roy I. Millard and R. P. Lichtenberg, Russellville; Jean Gladden, Harrison; D. W. Goldstein and W. R. Brooksher, Fort Smith.

Dr. and Mrs. Guy Hodges, Rogers, spent a recent vacation in Florida.

B. M. Saltzman, Mountain Home, was elected governor, district No. 198, Rotary International, at the meeting held in Eureka Springs March 30th.

Dr. and Mrs. Carl L. Wilson, Fort Smith, spent a recent vacation in Florida.

Lawrence Zell, Little Rock, and D. W. Goldstein, Fort Smith, attended the Missouri Dermatological Society meeting in Saint Louis March 30th.

Robert Watson, Little Rock, addressed the Southern Neurosurgical Society at Durham, North Carolina, April 12th, on "Treatment of Post-herpetic Trigeminal Pain."

Contributions to the American Medical Association Educational Foundation were received during April from J. R. Fairley, Trumann, and J. H. McCurry, Cash.

R. B. Robins, Camden, addressed the Tennessee Academy of General Practice April 7th at Knoxville.

R. B. Robins, Camden, was installed as president of the American Academy of General Practice at Atlantic City March 26th.

D. W. Goldstein, Fort Smith, attended the Oklahoma Dermatological Society at Oklahoma City March 29th.

The Sebastian County Medical Society was addressed April 8th by Henry M. Sims, Fort Smith, on "Psychiatry in General Practice."

G. E. Simpson, Secretary.

At the Dallas session of the Southern Medical Association, Fount Richardson, Fayetteville, was elected Chairman, Section on General Practice, and K. W. Cosgrove, Little Rock, was elected Chairman-Elect, Section on Ophthalmology and Otolaryngology.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE ABSORPTION, DISTRIBUTION, EXCRETION AND SHORT TERM TOXICITY OF ISONICOTINIC ACID HYDRAZIDE (NYDRAZID) IN MAN

By DuMONT F. ELMENDORF, JR., M. D. et al.,

The American Review of Tuberculosis, April, 1952

Isonicotinic acid hydrazide (Nydrazid) has been demonstrated by Bernstein, et al., of the Squibb Institute to have a considerable and unique inhibitory effect on the growth of mycobacteria *in vitro* and to exert an impressive degree of antituberculous activity in experimentally infected mice. Systematic studies of the pharmacology of this compound were conducted by Rubin, et al., who defined the acute and chronic toxicities of the drug for several animal species. They found that isonicotinic acid hydrazide was well tolerated by dogs for periods of three to four months when administered orally in doses which provided theoretically effective concentrations in the plasma. As a consequence of these observations, an investigation in man of the pharmacodynamics and antituberculous activity of isonicotinic acid hydrazide was started in November 1951 on the New York Hospital-Cornell Medical Service. Observations made in this study, on the pharmacology and toxicity of the drug when administered to patients with pulmonary tuberculosis, form the basis of this report.

Patients. The patients chosen for study were all adults with pulmonary tuberculosis classified as far advanced or moderately advanced by the criteria listed in Diagnostic Standards of the National Tuberculosis Association (1950 edition). With a few exceptions the patients had had long courses of streptomycin and para-aminosalicylic acid (PAS) and were discharging tubercle bacilli which were insusceptible to streptomycin *in vitro*. The type and timing of the clinical, bacteriologic, and roentgenographic observations made of the course of the tuberculous infection during isonicotinic acid hydrazide administration were identical with those used in streptomycin and other chemotherapeutic studies.

Drug. The isonicotinic acid hydrazide* used

was a highly purified crystalline powder incorporated into capsules containing 10.0 milligrams or 25.0 milligrams.

Dosage Regimen. For continued administration, the isonicotinic acid hydrazide was given orally in a total daily dose of 3 mgm per kilogram divided into two doses at approximately 12 hour intervals. Deviations from this regimen were made in certain individual experiments.

On the basis of the observations it appears that isonicotinic acid hydrazide (Nydrazid) can be administered daily for periods of four to sixteen weeks to patients ill with pulmonary tuberculosis without evidence of serious toxic reactions. The daily dosage regimen (3.0 milligrams per kilogram) generally used in the present study was associated with plasma concentrations of the drug which are considerably above those in the reported therapeutic studies in mice. The biologic studies with plasma, cerebrospinal fluid and tubercle bacilli in the present investigation indicate that the isonicotinic acid hydrazide distributed in the plasma and cerebro-spinal fluid of man is present in an active form in terms of antituberculosis activity *in vitro*.

It appears that from the standpoints of distribution, maintenance of antimicrobial activity and short-term tolerance, isonicotinic acid hydrazide in man displays properties which are highly desirable in an antituberculous drug.

Summary

Isonicotinic acid hydrazide (Nydrazid) was well tolerated in man in daily oral doses of 3.0 milligrams per kilogram for periods of four to sixteen weeks. The drug was rapidly absorbed and a high percentage was excreted in the urine during the 24-hour period after ingestion. Appreciable concentrations of the drug are present in the cerebrospinal fluid within three hours of an oral dose of 2.0 to 3.0 milligrams per kilogram in patients without meningitis. In patients with tuberculous meningitis the concentrations of drug in the cerebrospinal fluid after oral administration are sub-

* Generously supplied as Nydrazid by E. R. Squibb & Sons, New York, N. Y.

stantially higher than the concentration necessary to inhibit *M. tuberculosis* H37Rv *in vitro*.

The administration of isonicotinic acid hydrazide for the 4 to 16 weeks period on the 3.0 mgm per kilogram daily dose has not been associated with any manifestations of drug toxicity in any of the patients studied. It is probable that with higher doses or more prolonged administration, evidences of toxicity may be encountered.

The period of study has been too short to permit any statements concerning the possible emergence of drug-resistant strains of *M. tuberculosis* in the patients who have received the drug.

Finally, though isonicotinic acid hydrazide possesses a high degree of activity against *M. tuberculosis* in animals and in the body fluids of man, it is not possible from the present observations to make any positive statement concerning the therapeutic value of this compound in the treatment of tuberculosis.

HYDRAZINE DERIVATIVES OF ISONICOTINIC ACID IN THE TREATMENT OF ACTIVE PROGRESSIVE CASEOUS-PNEUMONIC TUBERCULOSIS

By EDWARD H. ROBITZEK, M. D., and
IRVING J. SELIKOFF, M. D.,

The American Review of Tuberculosis, April, 1952

In the synthesis of the antituberculous compound thiosemicarbazone of isonicotinaldehyde, Fox of the Roche Chemical Research Laboratories used isonicotinic acid hydrazide as an intermediate. Schnitzer and Grunberg in the Roche Chemotherapy Laboratories found that this compound exerts a striking and lasting effect on experimental tuberculosis in mice. A series of derivatives of isonicotinic acid hydrazide which were then studied showed that some of these exerted antituberculous activity similar to the original isonicotinic acid hydrazide. Three compounds have been consecutively and concurrently investigated clinically since June, 1951: (1) 1-isonicotinyl-2-glucosyl hydrazine, (2) 1-isonicotinyl-2-isopropyl hydrazine (Marsilid), and (3) isonicotinic acid hydrazide (Rimifon).

Ninety-two patients with pulmonary tuberculosis have been under treatment with two hydrazine derivatives of isonicotinic acid, (a) 1-isonicotinyl-2-isopropyl hydrazine (Marsilid) and (b) isonicotinic acid hydrazide (Rimifon). Of these, 44 cases of acute febrile, progressive caseous-pneumonic tuberculosis serve as the basis for this report. Therapy to January 15, 1952 has ranged from four to fifteen weeks. All patients experi-

enced rapid and marked reversal of their original toxic states, as evidenced by gain in weight, return of appetite, defervescence, and a sharp return in sense of well-being. Cough and expectoration have been eliminated or markedly reduced. Sputum bacillary contents have been reduced in 38 cases, and in 8 cases examinations for acid-fast bacilli on stained smears have been repeatedly negative.

On roentgenographic examination, reduction in cavity size has occurred in 17 cases and apparent diminution in exudate has occurred in 5 cases.

Therapeutic effects of isonicotinic acid hydrazide (Rimifon) after four weeks at 4 mg. per kg. daily are roughly equivalent to 1-isonicotinyl-2-isopropyl hydrazine (Marsilid) at the same dosage and for the same period. The incidence of early side reactions is moderately higher with the isopropyl derivative (Marsilid) therapy at comparable dosages although, from animal studies, isonicotinic acid hydrazide (Rimifon) might have a higher potential delayed toxicity.

The hydrazine derivatives of isonicotinic acid exert an impressive therapeutic effect upon the course of acute caseous-pneumonic tuberculosis in humans.

CURRENT STATUS OF ISONICOTINIC ACID HYDRAZIDE IN THE TREATMENT OF TUBERCULOSIS

The Executive Committee of the American Trudeau Society (Medical Section of the National Tuberculosis Association) has reviewed the evidence on the antituberculous activity of isonicotinic acid hydrazide placed before them through the courtesy of Hoffmann-LaRoche, Inc., of E. R. Squibb & Sons and investigators cooperating with them, and on the basis of this information makes the following statement for the guidance of the medical profession.

1. **Chemical Structure:** Isonicotinic acid hydrazide¹ is a chemically pure synthetically pro-

¹ Trade name used by E. R. Squibb & Sons, "Nydrazid"; of Hoffmann-LaRoche, Inc., "Rimifon."

duced substance of the general formula $C_6H_7N_3O$. It is obtained in almost colorless crystals which are highly soluble in water. The closely related isopropyl derivative is also being studied.² Isonicotinic acid hydrazide is also related to pyrazina-

² Trade name used by Hoffmann-LaRoche, Inc., "Marsilid."

mid³ and to amithiozone.⁴

³ Trade name used by Lederle Laboratories, "Aldinamide."

⁴ Trade name used by Schenley Laboratories, "Tibione."

2. **Activity in Vitro:** Isonicotinic acid hydra-

zide is bacteriostatic *in vitro* against *M. tuberculosis* H37Rv in a concentration as low as 0.02 to 0.06 mcgm./ml. Apparently it has a very narrow antibacterial spectrum, being ineffective *in vitro* against the common gram-negative and gram-positive pathogenic bacteria, certain protozoa, and the influenza virus in mice. It may possess slight antifungal properties.

3. **Activity in Vivo:** In several species of experimental animals experiments on the effectiveness of isonicotinic acid hydrazide against infection with virulent human strains of *M. tuberculosis* have given promising results in arresting the experimentally produced disease. From these data isonicotinic acid hydrazide appears to be approximately the therapeutic equivalent of streptomycin, at least early in treatment. Observations as to the emergence of strains of tubercle bacilli which may be resistant to isonicotinic acid hydrazide, either *in vitro* or *in vivo* are meager, and it is not known if such strains will emerge or will have therapeutic significance. A definite increase in resistance has been obtained *in vitro* with one strain (BCG).

4. **Toxicity and Pharmacology:** Although the toxicity of isonicotinic acid hydrazide has been determined fairly accurately in several species of animals, some aspects of the pharmacology and toxicology of the drug have not been elucidated. It now appears that both isonicotinic acid hydrazide and its isopropyl derivative are of relatively low toxicity in effective dosage ranges. The drugs are apparently largely excreted in the urine. After administration they appear to be well distributed throughout the body within an hour.

5. **Dosage:** On the basis of preliminary studies, the indicated daily dosage is in the range of 3-5 mg./Kg. body weight (150-300 mg. per day for the average adult) which is given by mouth in 2 or 3 divided doses. The drug may also be given parenterally.

6. **Toxicity in Man:** In the dosage range indicated, preliminary observations in man indicate that there is little significant toxicity. The following have been observed but are usually transitory even though drug administration is continued: (a) constipation, (b) difficulty in starting micturition (in males especially), (c) increased reflexes, (d) positional hypotension and dizziness, (e) eosinophilia, (f) slight drop in hemoglobin concentration, (g) occasional casts and traces of albumen and reducing substances in the urine. Toxic effects on the eighth cranial nerve, impairment or renal or hepatic function, or dermatologic manifestations have not been observed so far.

7. **Activity in Man:** In man preliminary observations on the effect of isonicotinic acid hydrazide on the course of tuberculosis have largely been limited to patients with far-advanced pulmonary disease, extensive tissue destruction, positive sputum and, as a rule, considerable symptomatology, many of whom have failed to respond or would not be expected to respond to other available therapy. In such patients, treated with 3-5 mg./Kg. per day for up to five months of therapy (the majority treated for 2-3 months), the following changes have been observed:

(a) reduction in fever, if present, in 2-3 weeks, in the majority, (b) reduction in cough, in the volume of sputum, and in the number of tubercle bacilli raised as determined by smear—no data from cultures are available on conversion of the sputum, (c) gains in appetite, weight, and strength, (d) some clearing of the reversible component of the pulmonary tuberculous disease by X-ray observation, (e) initial favorable response has been observed in non-pulmonary lesions and in a very few cases of military and meningeal tuberculosis.

8. **Problems:** Complete information is lacking on many aspects of the therapy of tuberculosis with isonicotinic acid hydrazide. Among the unknown are the following:

(a) the mechanism of action of the drug on the tubercle bacillus—whether it is tuberculocidal or tuberculostatic; the effect upon the enzyme chemistry of the tubercle bacillus, etc., (b) the mechanism of action upon the host—basically, the precise toxicity in man, (c) the optimal dosage; the number of milligrams per day; whether it needs to be given every day; the optimal mode of administration, (d) the duration of therapy: whether its effect is comparable to that of streptomycin and para-aminosalicylic acid (PAS), indicating relatively long courses of treatment, or whether shorter courses may be as effective, (e) the rate of emergence of drug-resistant strains of tubercle bacilli, (f) the effect of the drug upon the bacteriology of the patient: data are lacking on conversion of sputum by culture; the tissue bacteriology after varying amounts of treatment will need study, (g) the possibility of relapse after initial improvement, (h) whether basic systemic therapy of tuberculosis can be modified in treatment with isonicotinic acid hydrazide.

9. **Precautions:** At present there is no reason to believe that the fundamentals of therapy of tuberculosis should be altered when isonicotinic acid hydrazide is employed. Patients receiving the drug should be hospitalized and studied in institutions

where not only potential toxic manifestations may be watched for more carefully, but where effects upon the underlying tuberculosis may be carefully observed so that suitable alterations of therapy may be initiated when indicated. Routine laboratory precautions should include frequent blood counts and urinalyses, neurologic examinations, and tests for renal and hepatic insufficiency.

10. **In General:** The introduction of a new drug in the therapy of tuberculosis is likely to raise more questions for a few years than it will answer. Whether isonicotinic acid hydrazide or its isopropyl derivative will accomplish more than streptomycin and PAS is not known at present. It may prove to be an additional drug of great value. It may be years before its exact contribution to the therapy of tuberculosis can be assessed accurately. A large reservoir of undetected and untreated cases of active tuberculosis exists throughout the United States, and there is every expectation that in spite of the more effective chemotherapy of tuberculosis currently available, the need for hospitalization in institutions with qualified personnel and adequate laboratory facilities will increase rather than decrease. There is at present no basis for expecting that isonicotinic acid hydrazide, or any other drug, can safely be counted upon to reduce the duration of hospitalization. Rather, it may lead to prolongation of hospital treatment, since effective chemotherapy may facilitate desirable forms of therapy not otherwise possible.

It should be emphasized strongly that, with more numerous effective antituberculous compounds available in the treatment of tuberculosis, more intensive case finding than ever will be indicated. Only through this means can maximum advantage be taken of improvements in therapy.

11. **Summary:** After a review of available data on the action of isonicotinic acid hydrazide and its isopropyl derivative upon the tubercle bacillus *in vitro*, and upon the course of experimental tuberculosis in animals and clinical tuberculosis in man, it may be stated that their demonstrated action, although highly encouraging, appears in no way to alter the basic principles of the treatment of tuberculosis as presently understood. Much more work will need to be done to ascertain the exact place of these drugs in the treatment of this disease. It is anticipated that further information will accumulate rapidly.

EDITORIAL

THE WRITING OF PRESCRIPTIONS AS AFFECTED BY NEW FEDERAL LEGISLATION

The Durham-Humphrey bill, Public Law 215, 82nd Congress, became effective April 26th, and vitally affects the relationships of pharmacists and physicians. Purportedly designed for the protection of the public by designating those drugs which may be safely sold to the public and those which can be dispensed only on prescription, the law will cause confusion in its application.

The law specifically prohibits refilling of prescriptions for these restricted drugs without the knowledge and consent of the physician. The patient may not have his prescription refilled unless (1), the druggist obtains authorization for refill from the doctor by written statement or verbally over the phone, or (2), unless the doctor has stated on the original prescription that it may be refilled, or (3), unless the prescription calls for a simple household remedy.

A further complication is the prohibition to the druggist to refill the prescription given the patient or a refill, even with the full authorization of the doctor, and send the medicine to the patient if the latter happens to reside outside the "proximate" trade area of the druggist.

These are but two of the restrictive measures which are embodied in the law and show the continuing trend of Federal control over the health professions. It may be that some day effective opposition to these endeavors of Federal agencies will develop with doctors and druggists taking an important part. In the meantime, physicians are urged to fully cooperate with the druggist, upon whom the greater brunt of the burden falls in the matter.

RANDOM THOUGHTS OF THE SECRETARY

April 10th. Utilizing taxi, bus, car, airplane, we join the diagnostic clinic group at Jasper with a busy clinic and grateful people; a community which wants a doctor but has not quite realized the part it must play if a doctor comes. Today's trip over Highway 7 in beautiful spring weather is one with full enjoyment of vistas at each turn, a trip we suggest to Sunday drivers who would see the glories of Arkansas scenery.

April 11th. On our second bus ride of the week tonight, mechanical and weather trouble preventing our usual flight to Little Rock.

April 12th. Visiting with the Senior class to have our discussion interrupted with information that we must return home by bus, this time a definite annoyance, and we record no happy experience in the return trip and observe that the driver is an accomplished good-will man for Crown Coach Lines.

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(O) Original Article; (SP) Special Article

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PROCEEDINGS OF SOCIETIES

The Greene-Clay County Medical Society met on December 19, 1951, and elected the following officers for 1952:

President, J. M. Williams, Paragould; vice-presi-
dent, David Forse, Piggott; secretary-treasurer,
W. M. Lamb, Paragould; delegate, R. J. Haley,
Paragould; and alternate, Bryan Futrell, Rector.

The Greene-Clay County Medical Society met March 12 at a dinner party given in conjunction with the Auxiliary. The principal speakers in-
cluded Dr. Alvin Bowen Weir and Dr. Fontaine S. Hill. Dr. O. H. Clopton of Rector, Arkansas, pre-
sented a 12-year-old boy with myelogenous leu-
kemia for clinical study.

The Medical Auxiliary also had a dinner for the Society on Doctors Day at Dr. R. J. Haley's cabin.

WOMAN'S AUXILIARY NEWS

The Pulaski County Medical Auxiliary held the regular monthly luncheon meeting Wednesday, March 19, at the Y. W. C. A.

Hostesses for the luncheon were: Mrs. Glenn H. Johnson, Chairman; Mrs. John Laman, Mrs. H. Stuart Irons, Jr., Mrs. Randolph Tucker Smith, Mrs. Irving Spitzberg, and Mrs. Erner Jones. Mrs. C. W. Garrison gave the invocation.

Guests included Miss Margie Bartlett, Miss Marilyn McRae, and Mrs. Charles C. Steward.

Mrs. Gordon P. Oates, President, presided over the business meeting. The following delegates were selected to attend the Arkansas Medical Auxiliary Convention: Mrs. Hoyt Choate, Mrs. Joseph D. Calhoun, Mrs. W. A. Lamb, Mrs. Lloyd Wilbur, Mrs. J. R. Warden, Mrs. Edwin Gray, Mrs. Harlan Hill, and Mrs. William A. Snodgrass, Jr. Alternates are: Mrs. Leo Aday, Mrs. R. T. Smith, Mrs. Erner Jones, Mrs. C. E. Witt, Mrs. John Was-
sell, Mrs. Harvey Shipp, Mrs. A. C. Kolb, and Mrs. John Hundley.

The slate of officers to serve during the year 1952-1953 follows: President, Mrs. Hoyt Choate; President-Elect, Mrs. Ben Means; 1st Vice Presi-
dent, Mrs. Gordon Oates; 2nd Vice President, Mrs. Lloyd Wilbur; Recording Secretary, Mrs. William Snodgrass; Treasurer, Mrs. Ray Fulmer; Corresponding Secretary, Mrs. Robert Henry; Historian, Mrs. John Laman; Parliamentarian, Mrs. Raymond Cook; Publicity Secretary, Mrs. William G. Cooper, Jr.

Mrs. J. R. Warden, Chairman of Doctors' Day Activities, announced a brunch would be held on March 30 at Riverdale Country Club, in honor of the doctors of Pulaski County.

Mrs. Hoyt Choate introduced Dr. E. Lloyd Wil-
bur, who spoke on the topic "Nature of Cancer."



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1. Kissin, M.; Stein, J. J., and Adelman, R. J.: *Angiology* 2:217 (June) 1951.

2. Rickles, J. A. J. *Florida M.A.* 38:263 (Oct.) 1951.

*Contains at least 80% of anhydrous theophylline.



SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

Two films were shown: "Cancer Crusade, furnished by the American Cancer Society, and "Going Places" sent by Harding College.

The next meeting of the Auxiliary will be held April 16.

Mrs. Alvin E. Longstreth
Publicity Secretary
Pulaski County Medical Auxiliary.

The Auxiliary to the Boone County Medical Society entertained the Doctors with a dinner at the Hotel Seville at 7:00 P. M. Monday evening in honor of Doctor's Day which was March 30th.

This Day is an annual affair and March 30th was chosen as the day to honor the Medical Profession in commemoration of Dr. Crawford W. Long who successfully used the first anesthesia on March 30, 1842.

The dining room was beautifully decorated with spring flowers as gifts to our Doctors and the Daisy Flower and Gift Shop presented each Doctor's wife with a corsage.

A film was shown by Sargent Ray Drew on the Blood Bank.

Mrs. Ulys Jackson read a poem "The Doctors' Progress." The poem was written by a Mr. Penix years ago about Dr. G. I. Jackson's first car. The car was among the first cars in Boone county.

The evening was spent informally. Those present were:

Dr. and Mrs. W. H. Breit, Dr. and Mrs. W. A. Bradley, Dr. and Mrs. E. L. Keener, Dr. and Mrs. Ross Fowler, Dr. and Mrs. Ulys Jackson, Mrs. J. H. Fowler, Dr. and Mrs. H. V. Kirby, Dr. and Mrs. J. G. Gladden, Dr. D. M. G. Frailey, Dr. and Mrs. D. L. Owens, Mrs. Frank Kirby, Dr. O. B. McCorry, Dr. and Mrs. Troy Coffman, and Dr. and Mrs. W. A. Stanley.

Arrangements were in charge of Mrs. Ulys Jackson.

Mrs. James G. Martindale, president of the Auxiliary to Arkansas State Medical Society was the honor guest at a meeting of the Clark County Medical Society Auxiliary Friday, March 21, at the Caddo Hotel. Mrs. Martindale gave an interesting report of the five-phase program of the Auxiliary: Rural health, nurse recruitment, health education, legislation and public relations. She was presented with a lovely corsage of red roses.

Luncheon was served, followed by a business meeting presided over by the president, Mrs. Jack Kennedy. Plans were made for the observance of Doctor's Day which will be March 30. Auxiliary members are going to place flowers in the churches in honor of the doctors.

Mrs. T. T. Ross of Gurdon was welcomed as a new member. Mrs. Judd Martindale of Hope was also a guest.

BOOK REVIEW

Standard Nomenclature of Diseases and Operations: Edited by Richard J. Plunkett, M. D., and Adaline C. Hayden, R. R. L., 4th Edition. Pp. 1034. 4 illustrations. New York: The Blakiston Company, 1952. Price \$8.00. Published for the American Medical Association, this revision is complete to date. New diagnoses have been included, sections have been enlarged and complete revisions have been made in some listings. The widespread use of this volume as a "standard" will bring uniformity in statistics.

The Specialties in General Practice: Edited by Russell L. Cecil, M. D., Professor of Clinical Medicine, Emeritus, Cornell University Medical College, New York City. 818 pages with 470 figures. Philadelphia & London: W. B. Saunders Company, 1951. Price \$14.50.

In this volume are presented diagnostic and therapeutic standards and suggestions on a large number of conditions in the special fields of practice. While obviously completeness could not be attained in the discussions, the editors have done well in presenting a text which will assist in diagnosis and give treatment suggestions to the general practitioner when dealing with diseases and conditions which commonly come within the scope of the specialist.

Biological Antagonists: By Gustav J. Martin, Sc.D., Research Director, The National Drug Company, Philadelphia. The Blakiston Company, New York, Philadelphia, Toronto.

The author has accomplished the difficult task of summarizing the work pertinent to present day concepts of structural displacement and antagonism in the functioning of body tissues. Over 1,000 references are cited. The subject-matter is logically divided into twenty-two chapters. Six chapters each are devoted to amino acid analogues and vitamin analogues. In these chapters an insight is given as to the basic functioning of these substances. A valuable aspect of the book is the lucid recapitulation at the end of each chapter from which the reader is given a broad view of the problem and new avenues of investigation indicated. The book is of especial value to the Biochemist, Pharmacologist, Physiologist and Bacteriologist. Some basic knowledge of enzymes is essential for a proper understanding of the material covered. The chapters on pharmacological aspects, drug resistance, and vitamins should be of most interest to the practitioner.

Dynamic Psychiatry, Basic Principles, Volume I: By Louis S. London, M.D., Washington, D. C., 95 pages. Corinthian Publications, Inc., N. Y. 1952.

The first half of this book is devoted to a historical review of psychiatry since times of antiquity, and indicates a thorough study of that aspect of psychiatry by the author.

The remainder is concerned with basic principles of dynamic psychiatry. The manner presented and the esoteric language used would make it very unlikely to be of interest or value to the average medical practitioner.

The Life of Peter Fayssoux of Charleston, South Carolina. By Chalmers G. Davidson. Published by the Medical Association of South Carolina, 1950.

This is the biography of a physician who lived from 1745 to 1795. He served with the Continental Army during the Revolution and comments on the medical practice of that day are most interesting. This is a book to be read with enjoyment.

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